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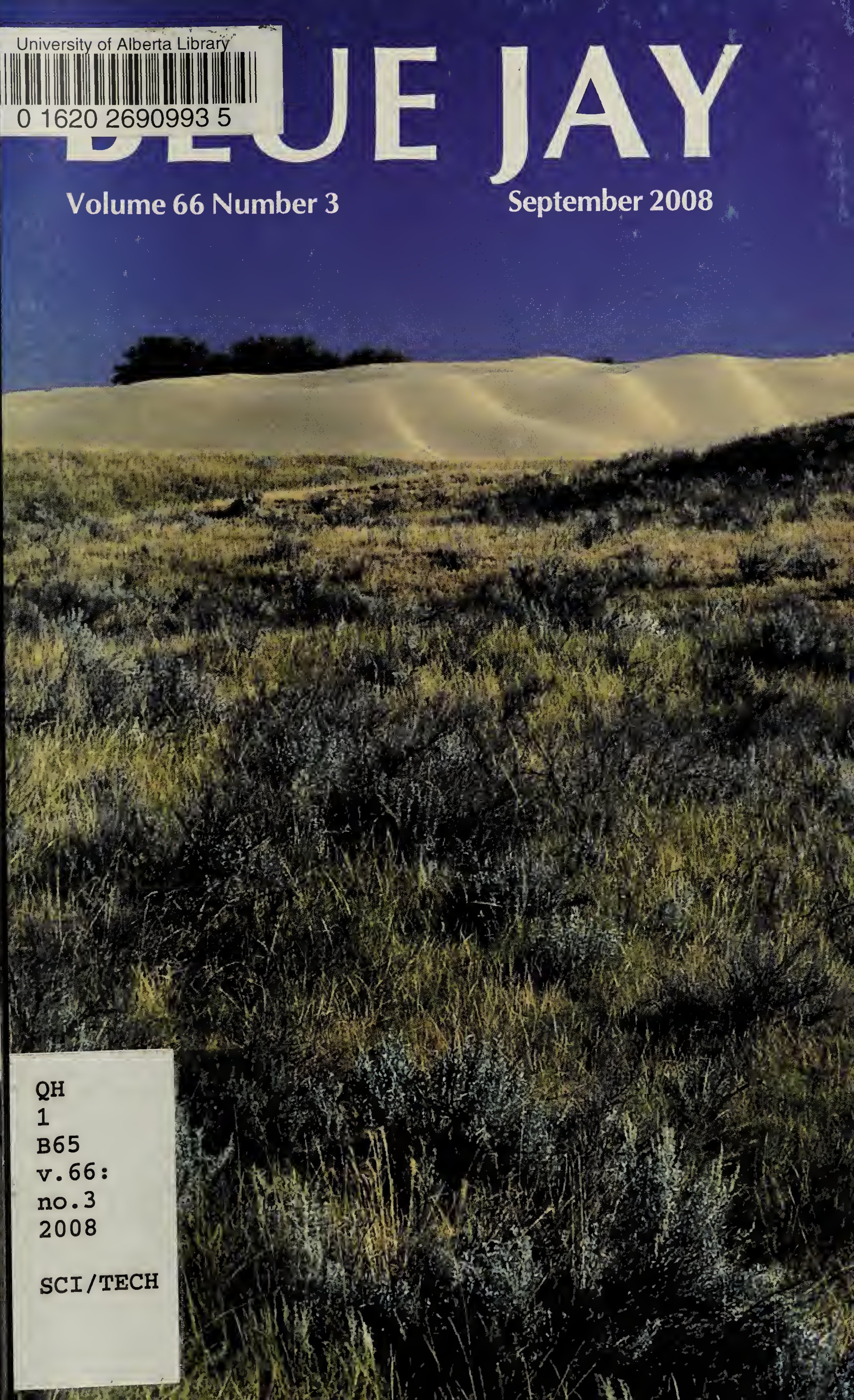
BLUE JAY

Volume 66 Number 3 September 2008



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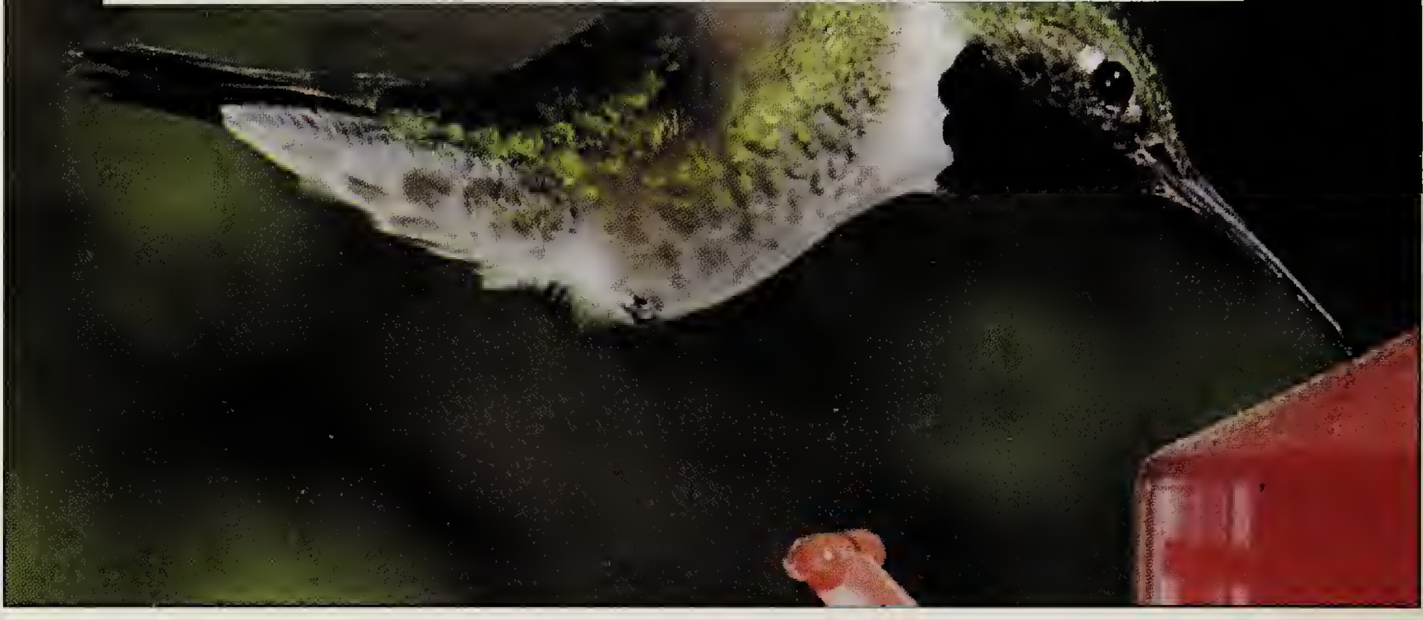

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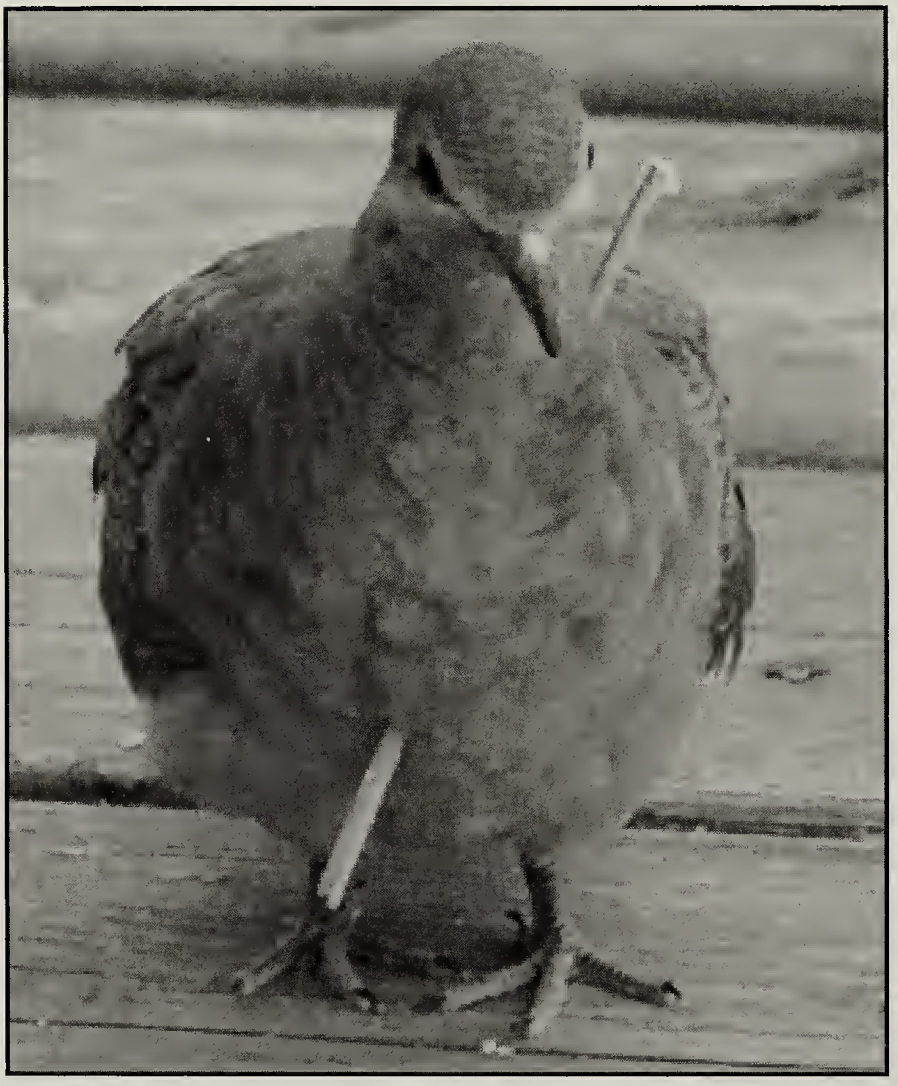

This photo of a Mourning Dove was taken on the deck at our farm west of Eastend. The dove was eating under the feeders for a couple of days with the straw attached and did not seem to be stressed at all. It was flying around impaled like this for a couple of days and, although it is difficult to identify individual birds, I am sure that I have seen her around without the straw, which I assume she was able to remove in a vigorous grooming session.
Bob Davis

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BIRDS

SHORT-EARED OWL INVASION AT BEAVERHILL LAKE, AB, WINTER 2005-2006

D. LISA PRIESTLEY, Beaverhill Bird Observatory, Box 1418, Edmonton, AB, T5J 2N5, GEOFFREY L. HOLROYD, Canadian Wildlife Service, Rm. 200, 4999-98 Ave, Edmonton, AB, T6B 2X3 and CHUCK E. PRIESTLEY, STRIX Environmental Consulting Ltd., Box 1013, Tofield, AB, T0B 4J0

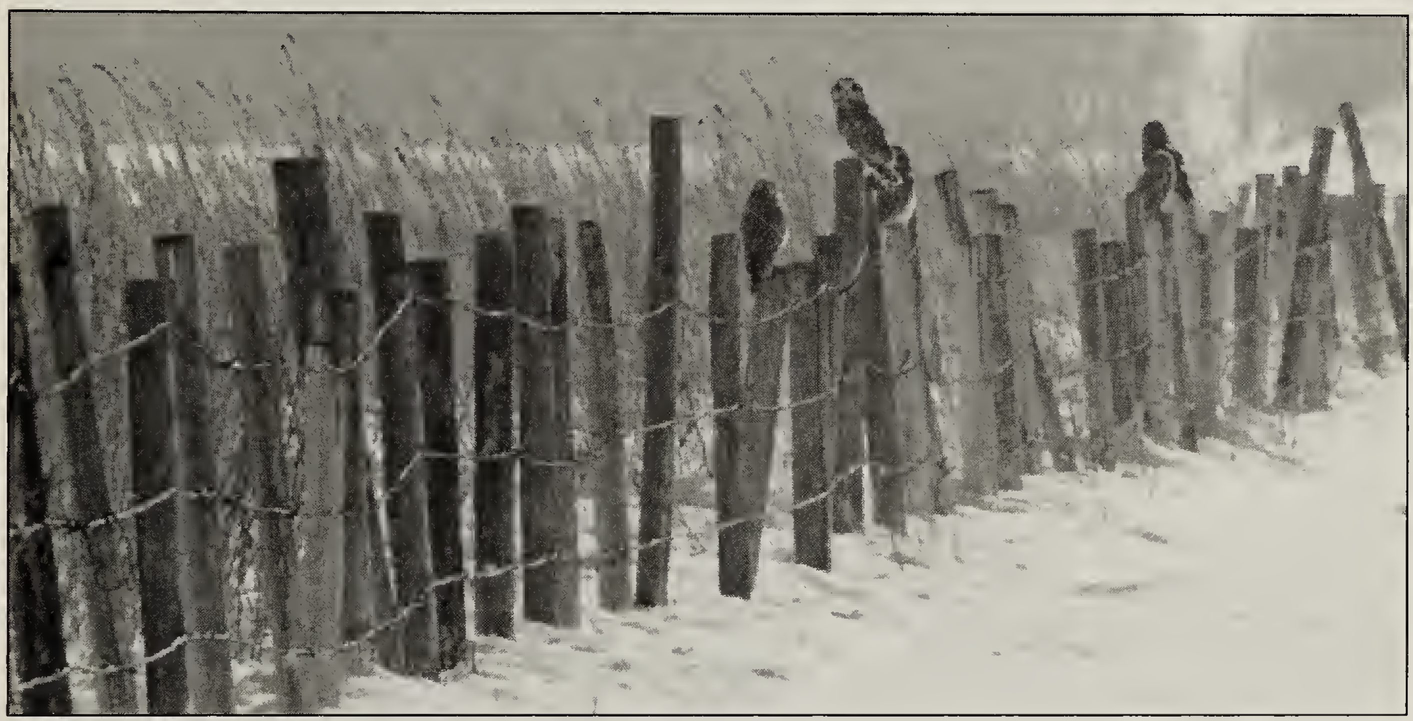

Figure 1. Five Short-eared Owls along a fence line at Francis Point, March 2006
Gerald Romanchuk

The Short-eared Owl (Figure 1) can be found on every continent except Australia and Antarctica.[5] It occurs in open habitats during the breeding and non-breeding seasons. In Canada, Short-eared Owls breed across the north temperate zone in all provinces and territories, but are most common along the Arctic coast and in Alberta, Saskatchewan, and Manitoba.[20] In those provinces, they occur mainly in southern, non-forested grassland areas, and in Alberta are most common in the Grassland Natural Region.[15,17,12,8]

Short-eared Owls exhibit a variety of movement patterns in different parts of their range. In northern Europe they tend to be migratory whereas in southern Europe they are usually year-round residents.[12] A similar pattern is thought to exist in North America. In addition to these variations, Short-eared Owls exhibit nomadism across their range.[19] Many individuals wander widely both seasonally and annually in search of resources.[20] They travel long distances searching for high densities of small mammals during both the breeding season and winter. Large numbers of Short-eared Owls may roost together in areas where food is abundant[5] and they tend to be gregarious, forming communal roosts

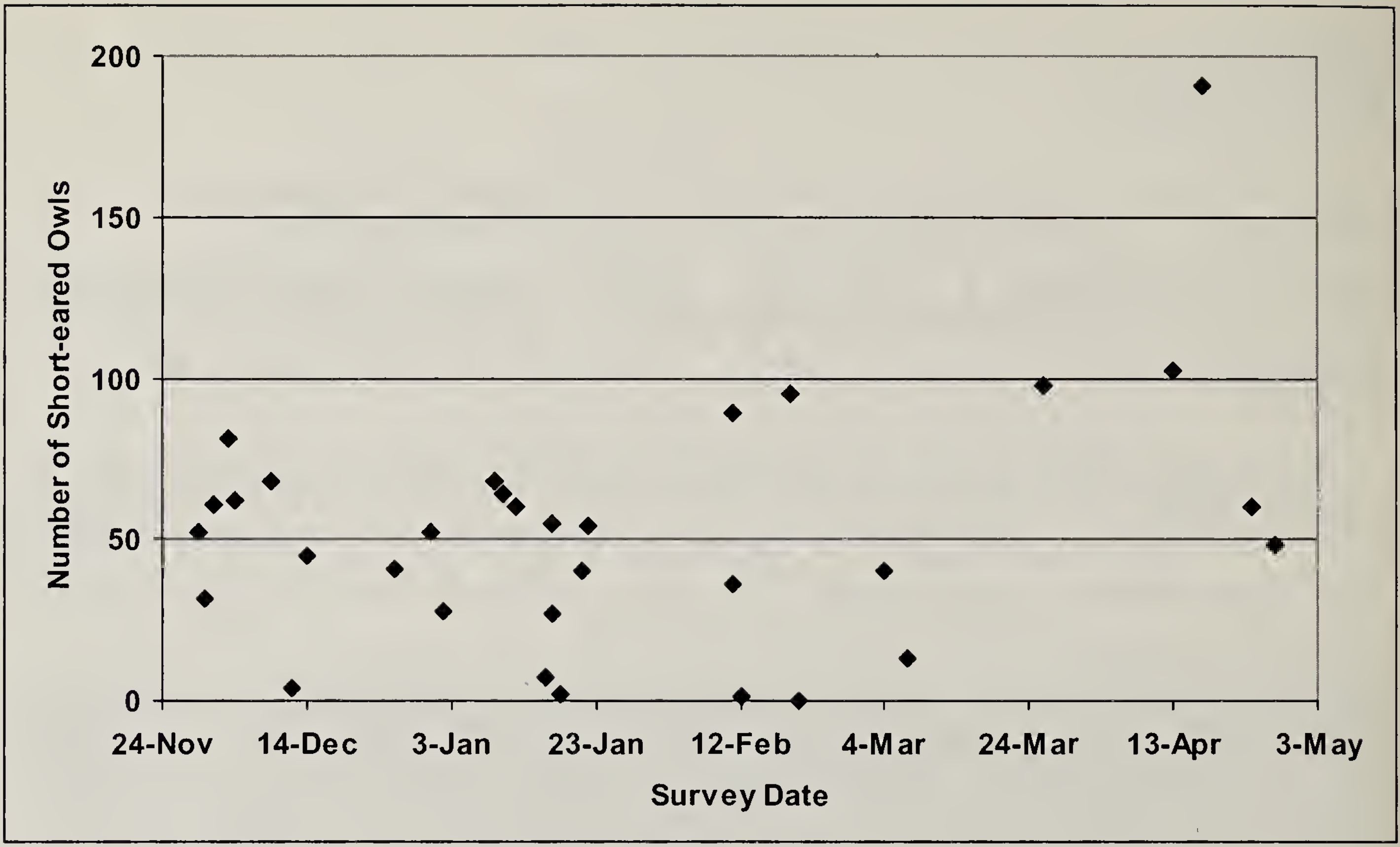

Figure 2. The maximum number of owls counted on each survey day between November 29, 2005-April 27, 2006.

Figure 3. Tyler and Logan Flockhart, and Lisa Priestley (8 months pregnant) at Francis View Point, Beaverhill Lake, New Year's Eve 2005. *Chuck Priestley*

in winter.[7] In fall 1931, Farley (in Bent[5]) reported an invasion of 'thousands' of Short-eared Owls that ate 'mice' that thrived in grain shocks in central Alberta. He only documented 24 seen on December 31 near Camrose and 116 counted by John W. Russell in 16 days between November 26, 1931 and February 5, 1932. While we cannot substantiate his estimates of 'thousands,' clearly an invasion of Short-eared Owls occurred that winter.

In 1991, the Short-eared Owl was on Alberta's Green List, signifying that it was a species not believed to be at risk in the province.[1] The species was moved to the Blue List in 1996 because it was felt that the species may have been at risk in Alberta.[2] In 2001, the Short-eared Owl was designated as 'May Be At Risk', due to declines in all prairie provinces and other parts of the North American range. Causes of population declines are unknown. The irruptive nature of the species makes trend assessments extremely difficult.[3] The Short-eared Owl continued to be classed as 'May Be At Risk' in 2005.[4] The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the Short-eared Owl as 'Vulnerable' (now called 'Special Concern').[6] After a review in 2007, the species maintained its 'Special Concern' status.[20]

On 29 November 2005, the first author (DLP) was walking along the south shore of Beaverhill Lake (53° 23' N, 112° 36' W) near Francis Point, a well-known wildlife viewing site. In 2005, the water levels at Beaverhill Lake were low and the water's edge was a few miles north of Francis Point. As DLP proceeded north toward the high water line, she heard the call of a Short-eared Owl in the distance. When the dry lake bed was scanned with binoculars from Francis Point viewing blind, 52 Short-eared Owls could be seen flying and hunting. Over the next few days, the owls continued to be present in high numbers. An e-mail was sent to a local bird watching listserve (Alberta Bird) to inform local bird enthusiasts. Subsequently, many birders went to Francis Point to see the owls. We requested that the birders send us the following information: date of observation, where observations took place, time spent observing, number of owls observed, type of optics used. When we started to receive the data, it became apparent that an unusual event was occurring at Beaverhill Lake because a large number of owls were observed for a long period of time in a small area. The main objective of this paper is to document the Short-eared Owl invasion that occurred during the winter of 2005-2006 at Beaverhill Lake and to explore the possible cause(s) of this event.

We compiled 46 sightings covering 29 days between 29 November, 2005 and 27 April, 2006. All observations were made looking north from the Francis Point blind (see map[10]). Observers scanned across the dry lake bed from east to west or west to east. A few observers also walked north onto the dry lake bed, but most observers did not venture past the old south shore of the lake. One or more of the authors were present on 30 of the 46 sightings (Figure 3). The other 16 sightings were submitted by several birders whose names are listed in the acknowledgements.

The number of owls counted was highly variable (Figure 2). The highest number of unique individual Short-eared Owls reported at one time from one point was 191 (17 April) and lowest number was 0 (20 February). However, the monthly maximum counts were relatively constant. The maximum counts were 81 on 3 December 2005, 68 on 9 January, 95 on 19 February, and 98 on 26 March. Despite this, we found that the average number of owls observed each day increased throughout the winter of 2005-06 ($r = 0.39$, $P < 0.01$).

This increase in average number of owls throughout the winter was likely a function of this species' nomadic lifestyle. When Short-eared Owls were passing through the Beaverhill Lake area during the autumn they may have stayed because of the high prey density. Records of this number of Short-eared Owls in one area are rarely documented in North America. As many as 200 owls roosted together in California where food was abundant (Tyler in Bent[5]). There were 650 owls in January and February 2003 in France, including six roosts each with 50 to 65 owls.[9] Before this concentration was reported, the largest Short-eared Owl roosts in France had not exceeded 20 birds. In the Netherlands, 2000 owls concentrated during a vole plague (Voous 1988 in Holt and Leasure[12]).

Beaverhill Lake has been drying out over the past few years, with 2005 being the driest year since the early 1950s. In the summer of 2005, Foxtail Barley (*Hordeum jubatum*) covered extensive portions of the dry lake bed. The microtine populations, particularly Meadow Vole (*Microtus pensylvanicus*) increased in number, presumably in response to the huge amount of seeds available. In addition, lower snowfall resulted in shallow (<10 cm) snow cover until March 2006. A Short-eared Owl breeding study that took place during 1977-1987 in western Finland reported that the number of nesting Short-eared Owls and the number of fledglings produced was positively correlated with spring density of *Microtus* voles.[12] In addition, they reported that Short-eared Owls immigrated rapidly into their study area when microtine densities increased and emigrated rapidly when densities decreased.[13]

Owls were observed foraging at all times of day but were more frequently observed during the 60-minute period before civil twilight.[18] Civil twilight is the time period when the sun has dropped 6 degrees beneath the western horizon; it is the instant at which there is no longer sufficient light to see objects with the unaided eye. In contrast, the number of owls observed at Beaverhill Lake varied throughout the day. Counts were made between 11:00h and 20:00h during the winter. Since sunset varied considerably throughout the observation period, we transformed the time that owls were observed into the number of minutes observations were made before sunset. We were then able to investigate whether the number of owls observed was related to the time of day relative to sunset (Figure 4). There was no linear relationship between number of owls observed and time of day ($P = 0.94$). On 3 December, 17 owls were observed at 12:15h, the number rose to 81 at 14:15h and by 15:00h only 29 were seen. Although this was only on one day, it did not follow the pattern documented by Swengel and Swengel.[18] On 26 December at 15:00h hours, 24 owls were counted in one pass, but when a Snowy Owl flew across the lake some previously undetected Short-eared Owls were flushed and the count increased to 41 at 15:15h. It is apparent that several factors affect the number of owls that are visible from one location.

Observer biases may have increased the variation in the data because the counts were made by many people. Another variable in the counts could be

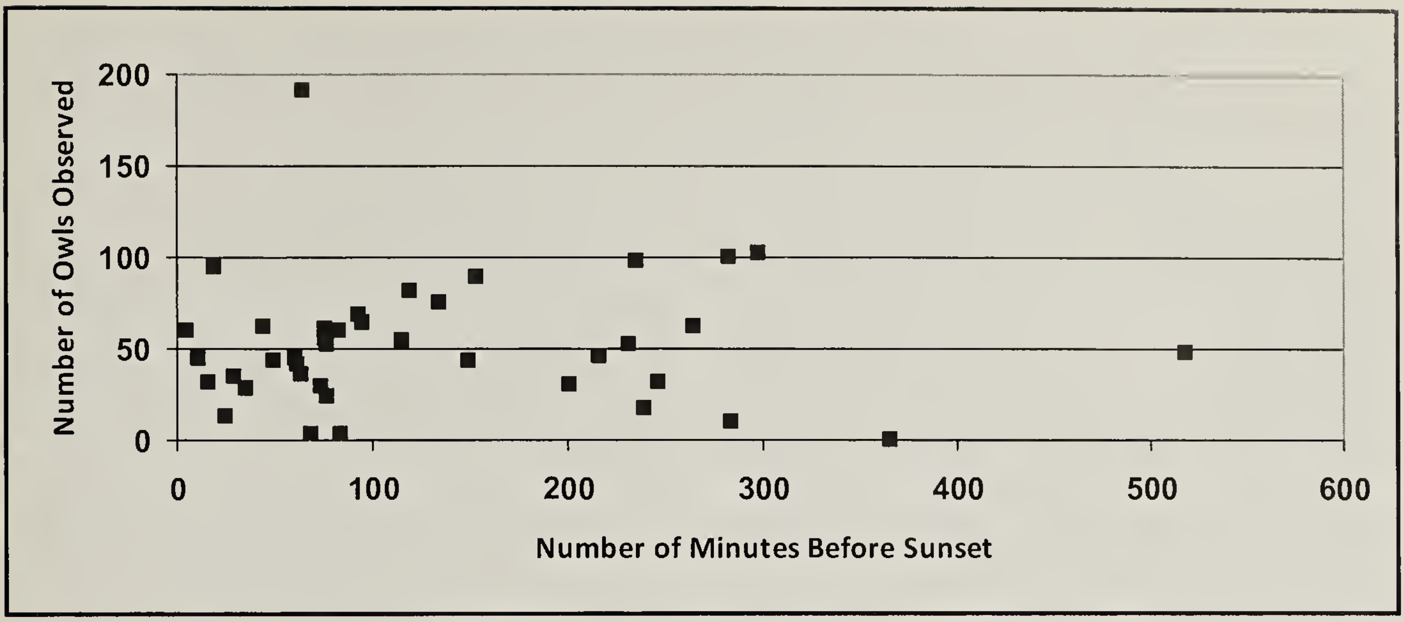

Figure 4. Number of owls recorded versus time to sunset (=0) observed, winter 2005-06 at Beaverhill Lake.

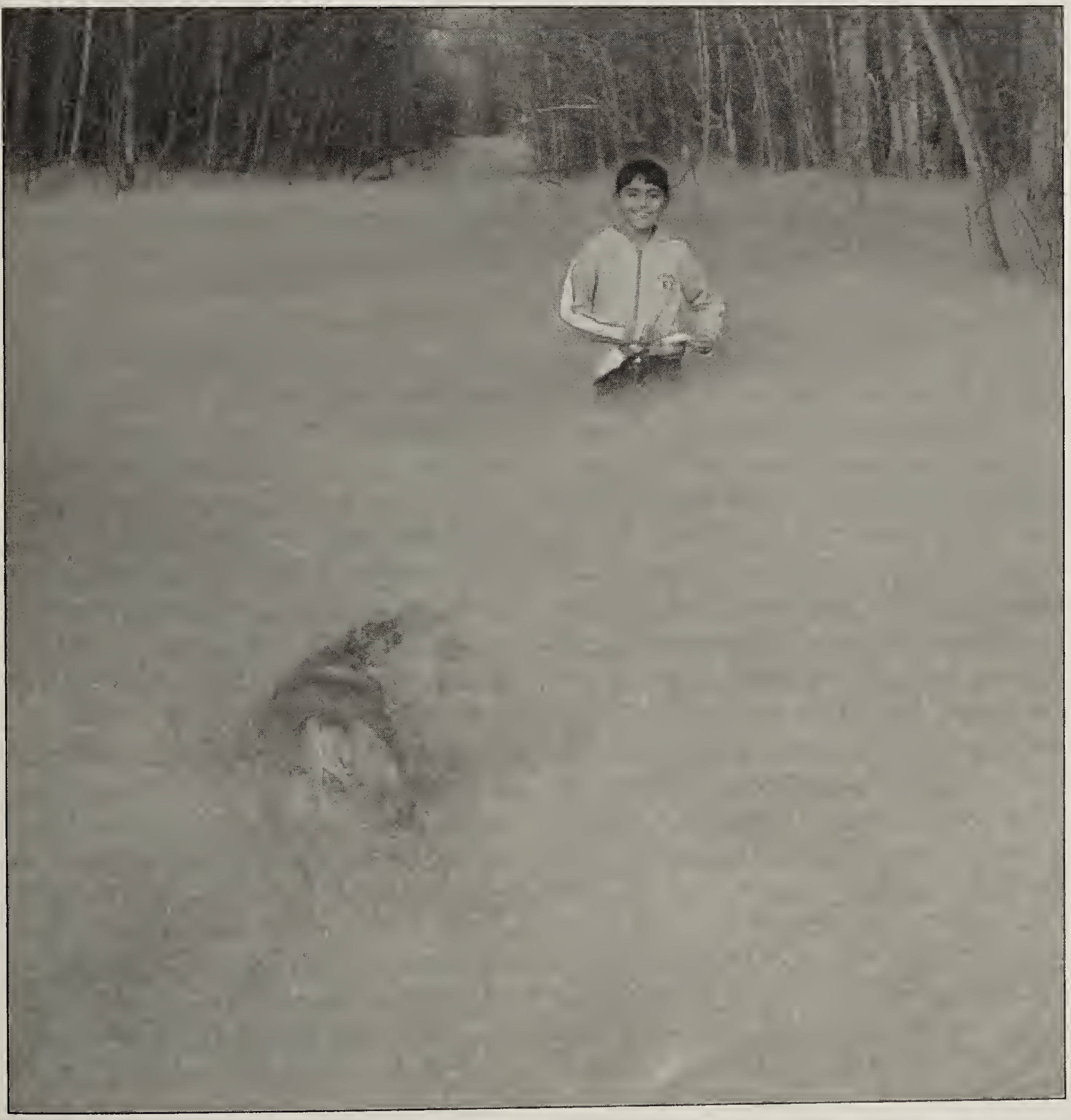

Figure 5. Stephie Valdez and Buttons standing in Foxtail Barley seed piles on the southeast corner of Beaverhill Lake, November 2005. Lisa Priestley

uneven distribution of owls over the lake bed area. On December 3, when the number of owls observed north from Francis Point varied from 17 to 81 through the afternoon, Gerry Beyersbergen saw none from Mundare Beach, on the east side of Beaverhill Lake approximately 10 km to the northeast of Francis Point. A number of other people who searched other portions of the lake throughout the invasion period did not find any owls. Clearly the distribution of Short-eared Owls was not even across the lake or in the general vicinity of the lake area. The most likely reason that the owls were concentrated along the southern shore of the lake is that prey density was highest there. In November, a staggering number of Foxtail Barley seeds blew down to the southern shore of the lake (wind direction is predominantly from the northwest). In many places seed piles were more than 1 m high (Figure 5). The influx of these seeds likely fueled the large increase to the small mammal population in that area.

Other species of raptors were also drawn to the area by its abundant food supply. Species seen around Francis Point and the south end of the lake included Snowy Owls (Figure 6), Northern Harriers, Rough-legged Hawks, and a Great Horned Owl. Snowy Owls and Rough-legged Hawks were observed on many visits throughout the winter. The most impressive multi-species days were 17 April (191 Short-eared Owls, four Red-tailed Hawks, 25 Northern Harriers, two Rough-legged Hawks, and one Snowy Owl), and 24 April (60 Short-eared Owls, two Red-tailed Hawks, 10 Northern Harriers, and three Rough-legged Hawks). The Red-tailed Hawks and Northern Harriers were spring migrants, not over-wintering raptors.

Other sightings of Short-eared Owls in Alberta for winter 2005-06 that we received include:

1 December – 4 individuals, west side of Egg Lake, north of St. Albert, (Dan Stoker)
16 December – 3 individuals, west side of Egg Lake, north of St. Albert (Dan Stoker)
17 January – 4 individuals, Big Lake Interpretive trail, St. Albert (Dan Stoker)
24 January – 2 individuals, Big Lake Interpretive trail, St. Albert (Dan Stoker)
13 March – 1 individual, west side Egg Lake, north of St. Albert (Dan Stoker)
13-14 March – 1 individual, Hwy 9 near Richdale, east of Hanna (Royce Howland)
26 February – 1 individual, northwest corner of Frank Lake, 50 km SSE of Calgary (William Wilson)
27 February – 2 individuals, near Hanna (John Carpenter)

These records indicate there were no concentrations of Short-eared Owls at these locations in winter 2005-06, thus showing that there appear to have been no other invasions in the region.

Finally, in spring and summer 2006 we searched for breeding Short-eared Owls along the south shore of Beaverhill Lake and were unable to locate any nests. They are known to breed on site regularly.[14] Up to six Short-eared Owls were reported flying near the Beaverhill Lake Natural Area by Beaverhill Bird Observatory staff throughout the summer months. In September and October 2006, up to seven Short-eared Owls were observed along the road running east-west on the south end of the lake, which could possibly have been a family of owls. No invasion was observed at Beaverhill in the winter of 2006-07 or 2007-08. Over 20 cm of snow arrived in

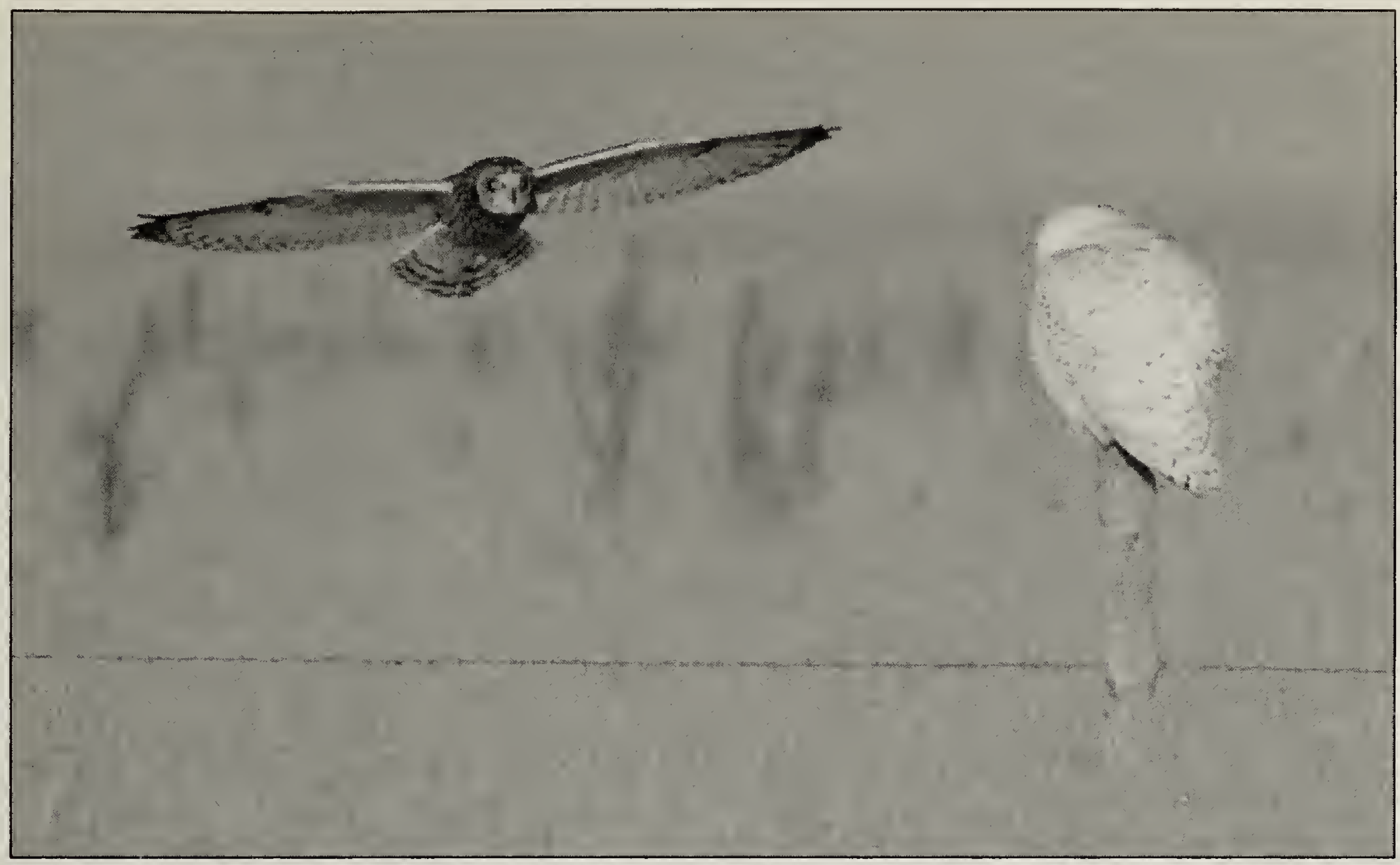

Figure 6. Short-eared Owl diving at a Snowy Owl, Francis Point, Beaverhill Lake
Gerald Romanchuk

November 2006 which may have prevented owls from foraging efficiently, and Foxtail Barley seeds were not as prevalent in both winters.

The large variation in the numbers detected between and within days demonstrates how difficult Short-eared Owl monitoring can be. This species is not well monitored by existing large scale surveys such as the Breeding Bird Survey and Christmas Bird Count. Even though there are concerns about population declines of Short-eared Owls, there are no management efforts in the United States, and only Newfoundland and Labrador have a plan in Canada.[16] A dedicated, long-term monitoring program needs to be implemented to better understand the Short-eared Owl.[20] Documenting invasions is critical to our understanding of where, when and why they occur. Moreover, satellite telemetry will further help us understand the movement patterns of individuals[11] and may help us discover other invasion locations.

Acknowledgments

Thanks to all the people who contributed their Beaverhill sightings: Gerry Beyersbergen, Karen Dean, Tyler and Logan Flockhart, Deb and Royce Howland, Andrew Iwaniuk, Dwight Knapik, Richard Krikun, John Moore, Jim Morrison, Carole Newton, Paul Newton, Jasmine Newton, Gill Priestley, Sam Priestley, Gerald Romanchuk, Martin and Patricia Sharp, Peter Stahl, Brian Stephens, Helen and Phil Trefry, William J.F. (Bill) Wilson, and Walter Yanowsheski. Thank you to Chris Fisher for forwarding our request for sightings to Alberta Bird Listserve. We also thank Gerald Romanchuk for providing photos. Helen Trefry provided comments on an earlier draft of this paper. Support from Beaverhill Bird Observatory is greatly appreciated.

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* * *

"The strangest [nest] building material of all is that of the edible swiftlet, an Asian species that builds a small, half-circular cup from strands of its own dried saliva (the nest is the main ingredient in bird's-nest soup)." Scott Weidensaul, The Birder's Miscellany, p.46

ADDITIONS TO THE BIRD LIST OF MANITOBA (1997 – 2007)

RUDOLF F. KOES, 135 Rossmere Crescent, Winnipeg MB R2K 0G1

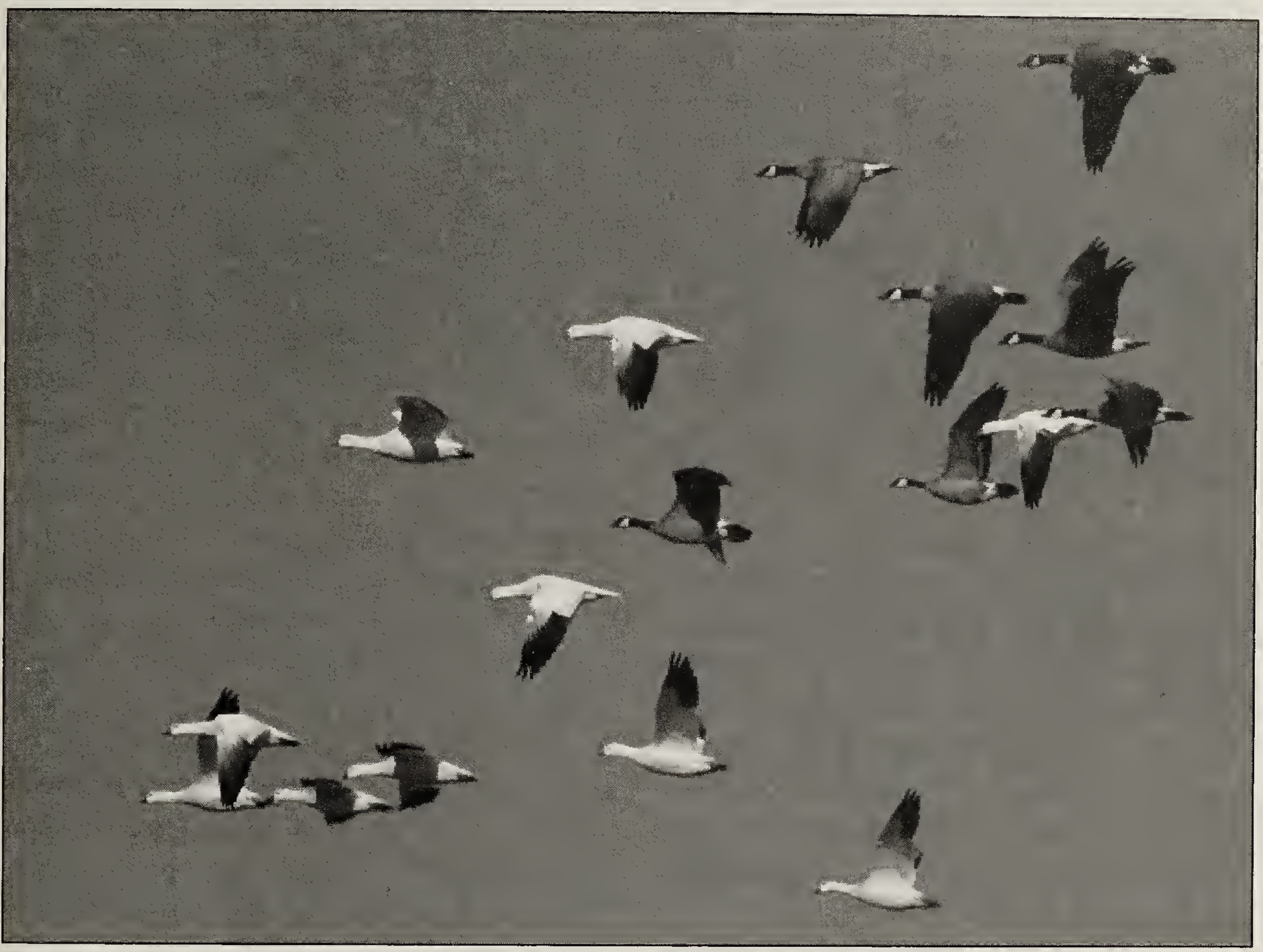

Figure 1. Cackling Geese and Ross's Geese near the Lac du Bonnet sewage lagoon, 19 September 2007. *Peter Taylor*

More than a decade has passed since the last article in a series on bird species new to Manitoba appeared in *Blue Jay*.[9] In this compilation, additions to the Manitoba bird list from 1997 to 2007 will be discussed. Given that bird populations are never static, with some ranges contracting and others expanding, new species are expected to show up at times while others disappear from our area. Furthermore, with the advent of the Internet, communication between observers has increased tremendously, particularly in the last ten years, which has led to timely reporting and confirmation of sightings of rarities. In addition, digital photography has allowed birders to document and share such sightings more easily. It is therefore no wonder that Manitoba's bird list has grown considerably since 1996 and stands currently at 389 species, including the 12 listed as confirmed in this article.

Two of the new species added since the last compilation were the result of taxonomic splitting (Cackling Goose and Spotted Towhee) and two were previously on Manitoba's hypothetical list (Black-tailed Gull and Prothonotary Warbler). Two species were added to the hypothetical list (Tufted Duck and

Bar-tailed Godwit). A few exotics (e.g. Eurasian Siskin and European Goldfinch) merit a brief mention.

The records herein were reviewed by the Manitoba Ornithological Records Committee (MORC) (H.W.R. Copland, Chair; A. Courcelles, R.F. Koes, R.W. Nero, and P. Taylor). Confirmed records (indicated by an asterisk*) are those for which a specimen, photograph, or sound recording exists, or they pertain to well-documented sight records by two or more competent observers. Unconfirmed sightings were convincingly documented by single, experienced observers. All other sightings are considered hypothetical.

***Cackling Goose.** (Figures 1 & 2) In 2004 the various races of the Canada Goose complex were split into two species, with the larger birds retaining the Canada Goose name and the smaller ones (with the exception of Lesser Canada Goose) becoming Cackling Goose.[2] Although very similar in appearance to Canada Geese, Cackling Geese have been shown by DNA studies to be more closely related to Barnacle Geese.[31,33] In Manitoba, the most common of the four races now included in the Cackling Goose complex is the one which was formerly often called Richardson's Goose. Although it largely breeds in the High Arctic, nesting is also known to occur in the extreme north of Manitoba (M. Gillespie, Manitoba Conservation, pers. comm., 9 November 2006). It is a common to abundant migrant through southern Manitoba, particularly in the southwest, where in fall up to 85% of checked birds in hunters' bags are Cackling Geese or small Canada Geese.[28] Some recent counts by birders include 3000 tallied by a Manitoba Naturalists Society outing at Whitewater Lake (in southwestern Manitoba) on 2 October 2004 and 3000+ near Warren on 22 – 23 April 2008 and 1000 at Lac du Bonnet on 6 – 8 October 2002, both by Peter Taylor. Migration peaks in southeastern Manitoba are late April to early May and late September to early October, with numbers varying from year to year.

There are very few summer records from the south: one remained through the season in 2007 (and possibly also in 2006) with Canada Geese near Pierson. Similarly, winter records are scarce so far, but expected to increase with continued scrutiny of goose flocks in that season. One lingered, with Canada Geese, until at least 2 January 2006 on the Assiniboine River at Winnipeg [25] and another was reported on 12 December 2007 at Seven Sisters Falls. Much still remains to be learned about the status of this species in the province.

Tufted Duck. A male was reported near Flin Flon on 19 May 2004. Unfortunately, no details of this sighting have been forwarded to MORC, hence its inclusion on the hypothetical list.[20]

The Tufted Duck, a Eurasian relative of scaup and Ring-necked Duck, occurs annually in small but increasing numbers in both Alaska and Newfoundland, with vagrants ranging farther south, primarily along both coasts but also inland at the Great Lakes.[35] There are scattered records through central U.S.A. and single reports from Alberta and Saskatchewan.[30,36,40] Given that sightings in continental North America have increased more than tenfold since the 1960s, future occurrences are expected in the prairie provinces.[35,40] Hybrids (Tufted Duck x scaup) are frequent, so observers should be extra careful with identification.

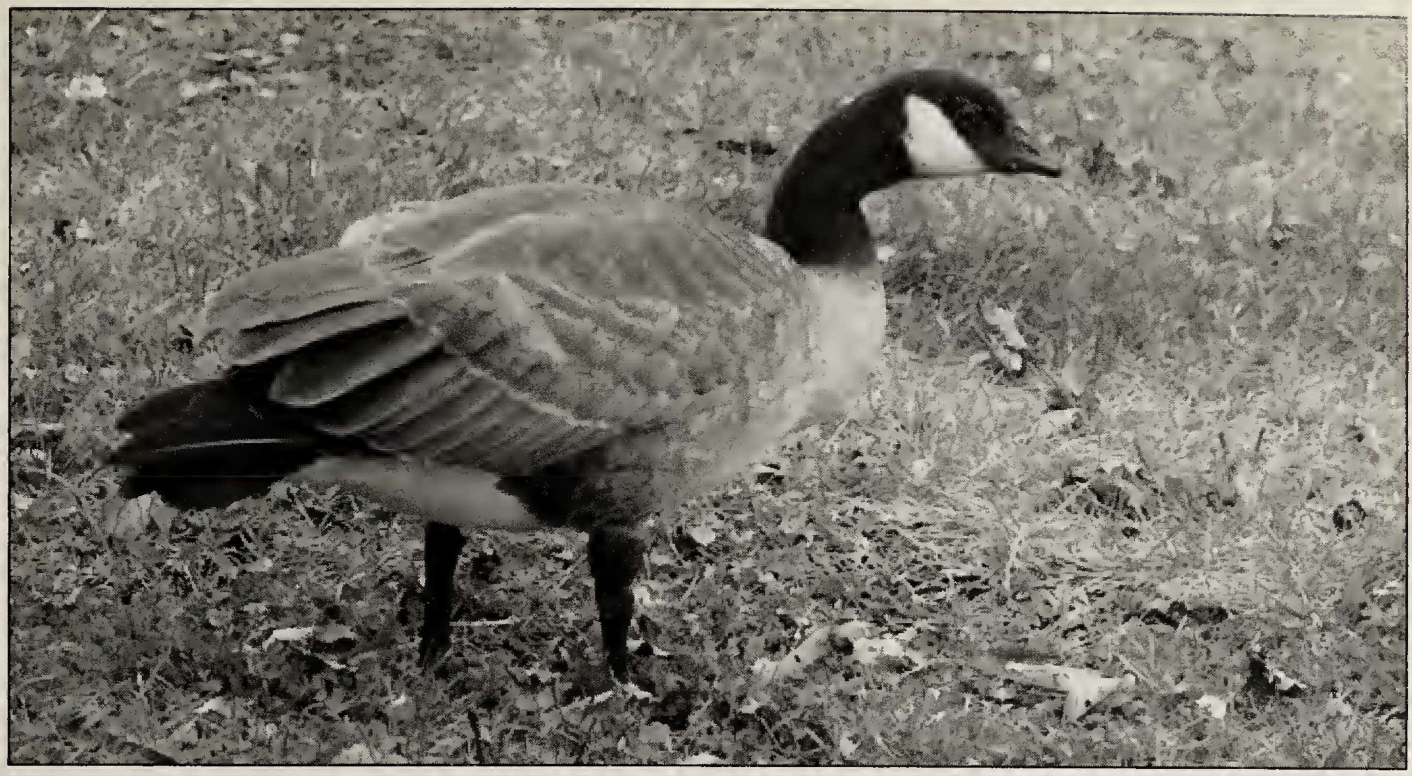

Figure 2. Cackling Goose in late September 2007 at Rainbow Falls, Manitoba
Deanna Dodgson

(Note: On 23 April 2008 a male Tufted Duck was seen and photographed by Nia Massey as it briefly visited the Red River behind her home, between Selkirk and Breezy Point. The photographs are diagnostic and there is no doubt that the record will be accepted by MORC in the near future).

***Wood Stork**. Manitoba's birding community learned, months after the fact, that a juvenal Wood Stork had been seen and photographed by visiting birders between the community of St. Ambroise and St. Ambroise Provincial Park, near the southeast corner of Lake Manitoba, on 5 August 2005. The observers were Norbert Riezing, who also photographed the bird, and Timea Gaspar, of Hungary.[24]

The nearest breeding areas are in southeastern U.S.A., but the species is known to wander widely, so its occurrence in Manitoba was not entirely unexpected.

***Black Vulture**. The occurrence of a Black Vulture at Wanless, in central-western Manitoba, on 11 May 2006 has previously been described in detail in *Blue Jay* by Christian Artuso.[3] This species wanders frequently north of its breeding range: there are numerous records for Ontario and recent sightings in Minnesota, plus outlying reports from Saskatchewan and Yukon.[3,5]

Bar-tailed Godwit. Birders who have visited Churchill in recent years are no doubt aware of the Rare Bird Alert board erected at Akudlik, outside of town. Sightings of rarities are usually recorded on it, and as such it serves a valuable purpose. In June 1998, two Bar-tailed Godwits were recorded on the board as having been seen along the Churchill River near town, on the 25th and again on the 27th, by one (or more?) members of a tour group. To the author's knowledge, no others present in Churchill at the time managed to locate the birds. Unfortunately, no details have come to light since, including the name(s) of the observer(s).[12] Confusion with Hudsonian Godwit, a local breeder, is a distinct possibility.

This primarily Eurasian species breeds also in extreme western Alaska, with vagrants occurring along both the

Pacific and Atlantic coasts of North America. There are no confirmed records for the prairie provinces.

Sharp-tailed Sandpiper. This species has long been on the to-be-expected list in Manitoba, as it is a regular, albeit rare migrant in Alberta and British Columbia.

On 4 June 2000, two visiting birders reported what they believed was an adult in nonbreeding plumage at Oak Hammock Marsh. Other birders present at virtually the same time saw what was presumably the same bird and identified it as a White-rumped Sandpiper. Based on this probable misidentification, the sighting was considered hypothetical. On 22 August 2003, Adam Walleyn observed a juvenile near Gillam and took detailed, convincing notes.[19] Unfortunately, Walleyn did not have camera equipment with him to document the sighting and no others saw this bird. Then, on 30 August 2005, Robert Storms and Michael Harrison, experienced birders visiting from Alberta, located a juvenile at Oak Hammock Marsh.[24] This bird was not located afterwards by others. MORC is still hoping to receive more detailed information on this sighting.

***Black-tailed Gull**. (Figure 3) Churchill is known amongst birders as a great place to see gulls, including such sought-after species as Ross's, Little and Sabine's gulls. At last count, 20 species have been recorded here, tying it with the Niagara region of Ontario/New York as the area with the greatest variety of gulls in the world. Number twenty came in the form of an immature (likely second year) Black-tailed Gull seen by Bonnie Chartier and Jeffrey Gordon on 29 June 2006. The bird was documented with excellent photographs and other details by Gordon.[26]

There was one previous record, documented by a single observer: Richard Knapton saw an adult while conducting surveys on Sagemace Bay, at the southwest corner of Lake Winnipegosis, on 2 June 1987.[7,8]

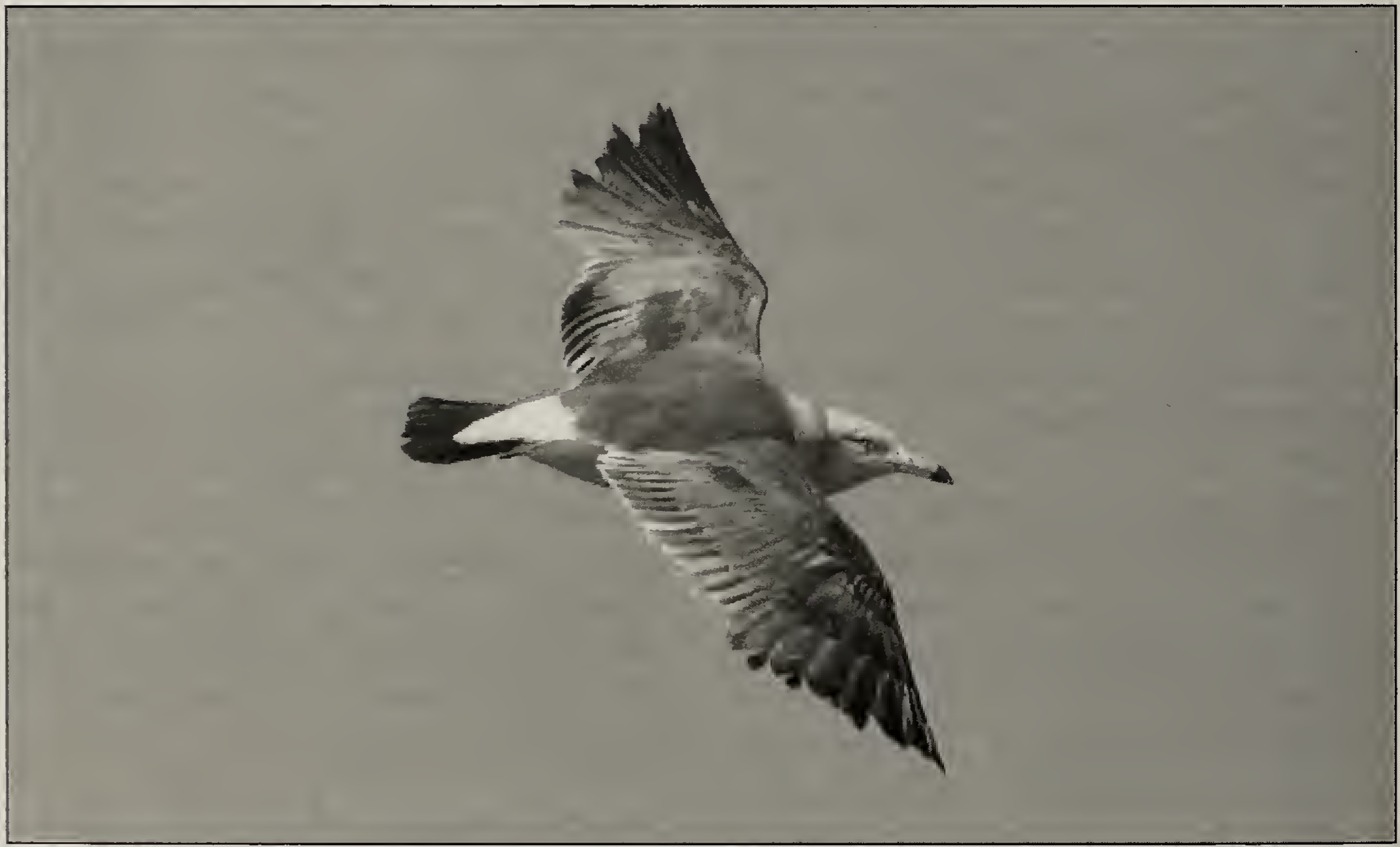

Figure 3. Black-tailed Gull at Cape Merry, Churchill, 29 June 2006

Jeffrey A. Gordon

Black-tailed Gull is an east-Asian species which is being reported with increasing frequency in Alaska and along the East Coast of North America.[35]

***Slaty-backed Gull**. The Portage la Prairie landfill, located between St. Ambroise and Delta and better known amongst birders as the “PR 227 dump”, is one of the few productive gull-watching dumps that is still open to the public.[29] Indeed, birders are made to feel welcome here. While visiting the dump on 11 May 2002, Dennis and Frieda Fast noticed an unfamiliar dark-backed gull. Dennis, a well-known photographer, lacked his usual camera equipment, but Frieda reminded him of the video camera they carried with them and the bird was duly recorded. Later frame-by-frame analysis revealed that the bird was a near-adult Slaty-backed Gull.[17]

This is another east-Asian species that has become a regular visitor to the West Coast, with scattered sightings elsewhere in North America, including several in Alberta and Saskatchewan.[30]

***Eurasian Collared-Dove**. (Figure 4) This species was introduced to the Bahamas in the 1970s, spread to Florida in the early 1980s, and has since rapidly invaded much of North America. A similar, rapid spread took place in Western Europe in the mid-20th Century. Although it is still local, and far from common, it has become established in all three prairie provinces, with highest numbers so far in Saskatchewan.

A scruffy individual, lacking tail feathers, was video-taped at Winnipeg on 7 January 2000 and was likely the first Collared-Dove for the province, but the images were not entirely diagnostic.[14] One cooperative bird at Holland, present for about a week up to 12 May 2003, provided the first confirmed record. First noted by Colleen Steinke and then identified by Adam Walleyn, it was seen and photographed by many.[18,28] Another individual was seen at Landmark on 18 and 19 October 2003. During fall 2004 and winter 2004-2005 up to two birds were near Pierson, in the extreme southwest of Manitoba, and a probable

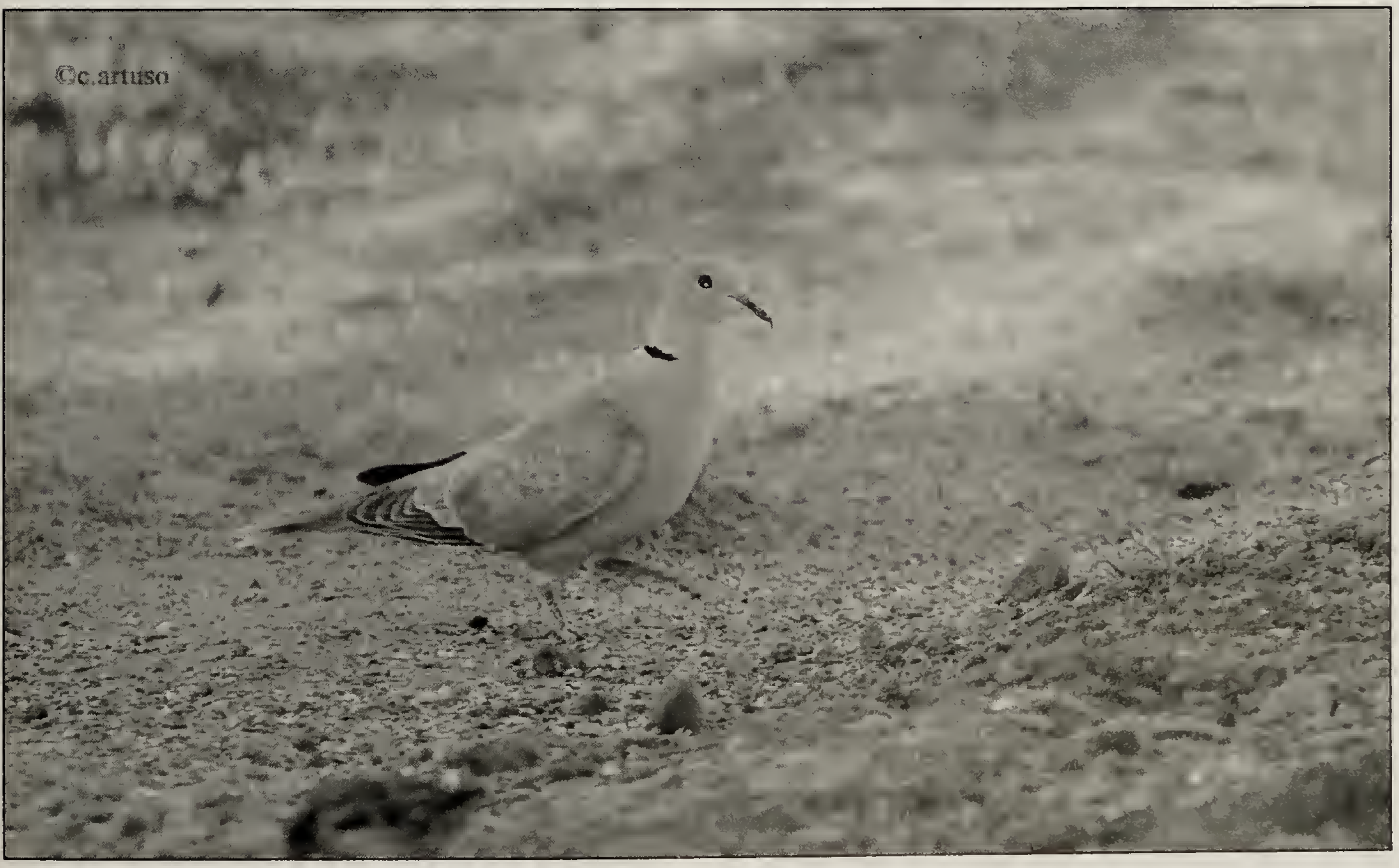

Figure 4. Eurasian Collared-Dove at Lyleton, MB, 2 June 2007 *Christian Artuso*

Eurasian Collared-Dove was at the Brandon Hills. In May 2005 (and again in 2006 and 2007) the species was found nesting at Lyleton, not far from Pierson.[23]

Other reports have come from Dauphin, MacDonald, Winkler and Winnipeg. At the Winkler location, up to 10 birds were present during the fall of 2007 (Leonard Braun, pers. comm.). No doubt this dove will continue to spread slowly across southern Manitoba.

***Broad-tailed Hummingbird**. (Figure 5 on the inside front cover, top) Were it not for the loud whistling sound created by its wings in flight, an out-of-range Broad-tailed Hummingbird could easily be dismissed as a Ruby-throated Hummingbird. Fortunately, Carrie and Helen Braden noticed this characteristic sound when a hummer showed up at Helen's feeder near Portage la Prairie on 16 May 2006. The bird was tentatively identified as a male Broad-tailed Hummingbird at the time; this was soon confirmed by others. The hummer was last noted on 29 May, after it had been seen and photographed by numerous people.[3] As an aside, this same feeder hosted a Rufous Hummingbird from 15 to 22 September 2004.[21]

The normal range of the Broad-tailed Hummingbird is in the western mountains, from Mexico as far north as central Wyoming, southwestern Montana and probably southwestern South Dakota.[37]

Ash-throated Flycatcher. On 18 September 2001, and again two days later, Ken Gardner observed an Ash-throated Flycatcher at Grosse Isle.[16,28] This southwestern flycatcher had long been on the list of birds expected to appear in Manitoba, as it is a frequent wanderer, with numerous records along the East Coast. No others managed to confirm this sighting and no photographs were obtained.

***Pinyon Jay**. On 25 October 2000, a Pinyon Jay was noted at three St. Adolphe feeders.[15] No photographs were obtained and subsequent searches were unsuccessful, but descriptions provided by observers at two of the feeders were diagnostic. During the same fall there was "a very large movement of various western mountain species out of the mountains" which included Pinyon Jays and was possibly related to particularly widespread fires in western U.S.A. that summer and early fall.[27]

***Curve-billed Thrasher**. In mid-March 1999, the Manitoba birding community learned of a Curve-billed Thrasher that had been visiting two feeders in St. Claude, apparently since early November 1998. It had been tentatively identified by Raymond Chattel and the identification was confirmed by Heidi den Haan. Dozens of birders descended upon the area on 21 March 1999 to observe and photograph the thrasher, which was last seen on 4 April.[10] Concurrently, a Curve-billed Thrasher was present in Barrhead, Alberta.[10] These two sightings represented the first confirmed records for Canada. Recently Saskatchewan added the species to its list when a bird frequented a feeder at Dalmeny from early November until mid-December 2006.[32]

The normal range of this thrasher stretches from Mexico north to Colorado and Kansas.

***Prothonotary Warbler**. On 3 October 1997, Andy Courcelles discovered a female or immature male Prothonotary Warbler skulking through weeds along a creek bed next to his St. Adolphe home. The warbler remained in the area until 6 October and was seen by many. Detailed descriptions were received by MORC.[28] Prior to this sighting, there had been two reports: one at Delta on 17 May 1989 and one at Birch Point on Lake of the Woods on 31 July 1990, but neither was documented in detail.[9] The first photographic evidence was obtained on 12 May 2001 in the form of a videotape taken at King's Park, Winnipeg, by Robyn and Todd Underwood.[41] Other well-documented sightings have since taken place at St. Ambroise Provincial Park on 11 September 2004 and at Fort Whyte Centre (FortWhyte Alive) from 3 to 6 May 2006.[3, 21]

***Swainson's Warbler**. Perhaps the most unusual of several outstanding rarities in the spring of 2006 was a Swainson's Warbler seen and photographed on 8 May by Christian Artuso at Beaudry Provincial Park, just west of Winnipeg. It represented the first record for western Canada of this rare denizen of damp woods in the southeastern United States.[3]

***Spotted Towhee.** Until 1995, Spotted Towhee was considered to be the western race of Rufous-sided Towhee.[1] In that year, the complex was "split" (the eastern counterpart became Eastern Towhee). It appears that the first record for the province involved a male collected at Whitewater Lake on 4 May 1925.[38] Few observers kept track of the form in the following decades, but there are infrequent reports from the 1930s through the 1980s.[6,39] Since the early 1990s, the number of reports has increased, but this is likely due to better communication between birders, rather than a real increase in numbers. Notable recent out-of-range sightings occurred at Churchill on 25 June 1992 and at Winnipeg during the winter of 2004-2005,[11,22] A photograph was taken by Renee Will near Brandon on 7 September 1992.[28]

The first confirmed record after the split involved a male on territory from 4 July 1999 until at least 10 July 1999 near Lauder.[13,28] (The species was also reported at this location in 2000, 2001 and possibly 2002). At present, a few are noted annually somewhere in the province. Overlap between the breeding ranges of Spotted and Eastern Towhees occurs in southwest Manitoba, southeast Saskatchewan and elsewhere on the Great Plains; this frequently leads to hybridization, so care should be taken when identifying the species.[34] Mixed pairs have been noted in southwest Manitoba; a male Spotted Towhee paired with a female Eastern Towhee was at Oak Lake in 2007 and there were probably one or two similar pairs in the region in recent years (Ken De Smet, pers. comm.).

Exotics. Accidental or intentional releases of captive birds take place frequently, particularly in the case of waterfowl, doves, parrots and their relatives, and certain small, colourful songbirds. When such a species is seen in the wild, it may brighten up a birding day, but a dilemma arises: Can I count it or not? MORC has taken a conservative approach in its evaluation of sightings involving such species, including Eurasian Siskin and European Goldfinch, both of which have been seen and documented by photographs in recent years. A male Eurasian Siskin (Figure 6 the on the inside front cover, bottom) frequented a Winnipeg feeder in March 2005 [23] and European Goldfinches were noted at

Gimli on 31 October 2003 [19] and at St. Adolphe on 10 May 2005.[23] There is also a second-hand, undocumented, report of a Linnet sighting at Churchill in June 2007 (B. Chartier, pers. comm.).

Rumour has it that a large importer of birds at Vernon Hills, IL, closed shop in 2002 and released most of the birds it kept, which included tits, finches, siskins and linnets. A rash of sightings occurred thereafter, stretching from the Midwest to southern Canada and beyond. While true vagrancy in some of these species is not impossible, it is the less-likely scenario.[4]

Acknowledgements

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* * *

ADAPTATION: KANGAROO RAT

A xeric rat is thus described:
“bipedal, saltatory,”
which means it hops on its hind legs
across the desert story–
metabolism’s water’s all
it “drinks,” and that’s its glory.

- Victor C. Friesen

HOURLY DISTANCES AND ALTITUDES OF A RECENTLY-FLEDGED TURKEY VULTURE ON ITS FIRST SOUTHBOUND MIGRATION *

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Introduction

In 2004, we fitted a nestling Turkey Vulture with a satellite transmitter, and subsequently documented its first fall migration from Saskatchewan to Costa Rica and its return the following spring as far as Nebraska.[5] In 2007, we fitted another nestling at the same nest with a transmitter that yielded more accurate and frequent locations, and followed its migration southward. Here we report on the results of this recent migration, compare it with the previously monitored one, and provide estimates of migration speed and elevation.

Methods

On August 5 2004, a Turkey Vulture nestling was fitted with a 35g solar-assisted satellite platform terminal transmitter (PTT) and patagial tag H25. The nest was in a long-deserted farm house west of Ranger, SK (53.6249 N, 107.7620 W), where Ken McDaid, the neighboring farmer, had observed a nesting vulture each summer since 2002. The PTT averaged five irregular Doppler transmissions per day, with accuracy varying between 150 m and 10 km.[1] The four highest accuracy ratings provided 346 locations during its 67-day migration to its wintering grounds in the mountains south of San Jose, Costa Rica.[5]

On August 5, 2007, a second Turkey Vulture nestling from the same nest site west of Ranger was fitted with an improved PTT that was capable of hourly reporting with a global positioning system (GPS). The 70 g solar-powered PTT-100 transmitter #65543 (manufactured and refurbished by Microwave Telemetry, Inc., Columbia, Maryland)[8] was attached to the bird's back and contained sensors for temperature, battery voltage, transmission counts and activity counts. The PTT transmitted hourly at a frequency of 401.650 MHz ± 36 kHz, giving spatial readings within ± 15 m and altitude readings accurate to ± 22 m. A patagial tag, number A33, was placed on the right wing at the same time and here we refer to this individual Turkey Vulture by this tag number. Techniques for application of the backpack transmitter and the approval of the Animal Care Committee, University of Saskatchewan, were as described previously.[5]

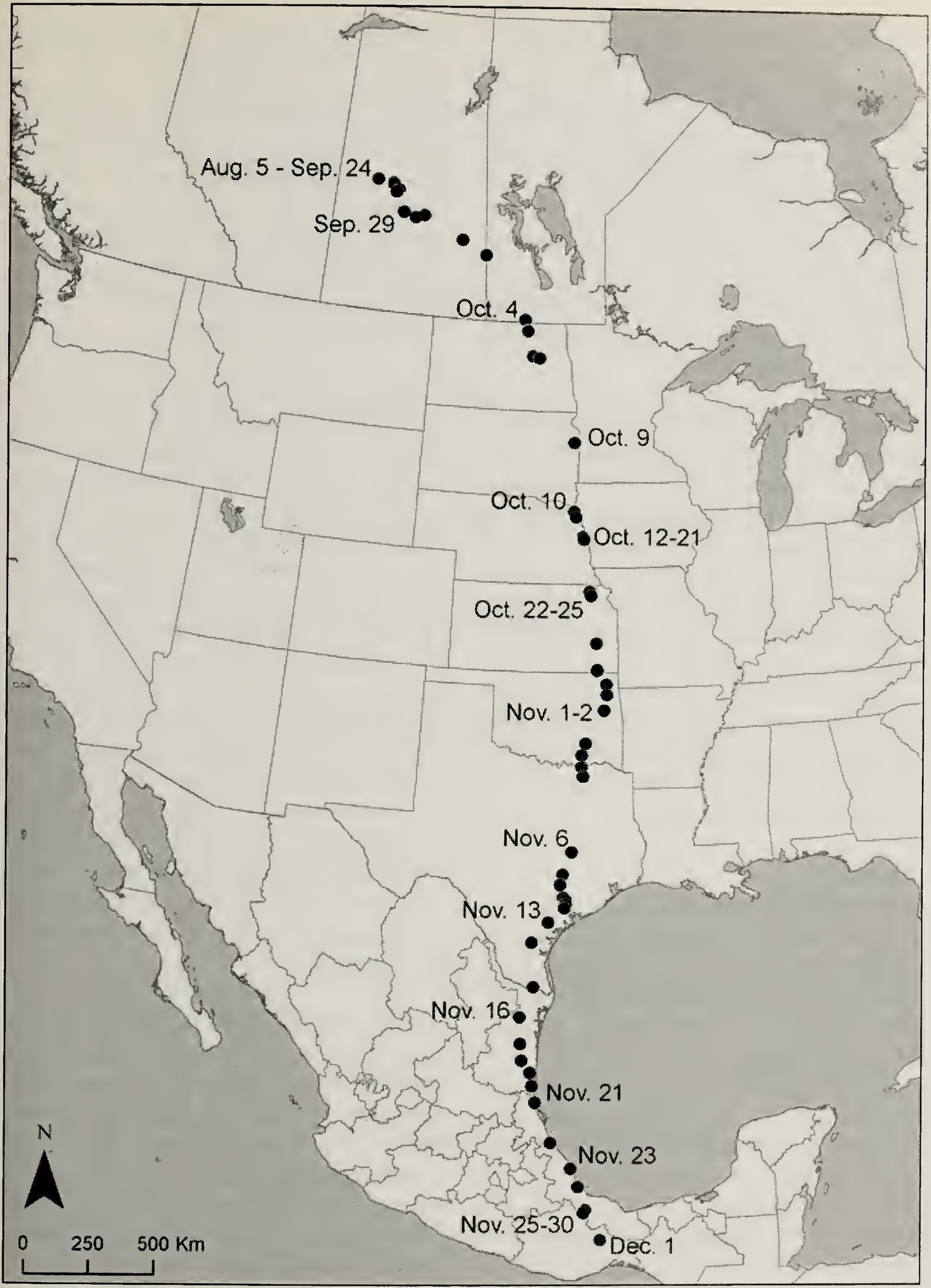

Figure 1. Each dot represents the bird's position at the beginning of a "travel day".

Map by David R. Barber

Hourly distances and daily total distances were calculated using Grinwich. Days with all hourly distances less than 5.4 km, assumed to be consistent with feeding movements rather than migration, are referred to here as ‘rest days’; those with at least one hourly distance greater than 5.4 km are called ‘travel days’. Distances are rounded to the nearest km and time is given in Central Standard Time (CST).

To get a rough estimate of how high above the ground A33 was flying, we took the altitude of the night-time roost to represent the average ground level of the terrain it was flying over during the day. Each flight altitude was the number of meters above the night-time roost. Using the night-time roost to approximate ground level for the previous day’s travel seemed justified because A33 traveled across the relatively flat terrain of the Great Plains in Canada and the United States, and along the coast in Mexico.

Results

Transmitter readings indicated that the vulture first moved out of the farm house at 1000h on August 13; it roosted outside the house that night and for the 10 subsequent nights. Morning flights of 130, 150, 270 and then 330 meters began on August 14. On August 28, the vulture was back beside the house. A flight of 610 m was made in the evening of September 4. Its first flight of more than 1 km occurred on September 10, and the first over 2 km on September 19, the day that Ken McDaid phoned to tell CSH he saw the tagged nestling flying at a distance from the house. On each of these flights and many shorter ones, the bird returned promptly to near where it began.

At 1000h CST on September 24, 2007, the bird traveled 19 km south in 3 hours but returned to its nest site 2 hours later. The next day its southbound migration began at 1100h. It traveled or rested for 69 days in a gentle arc through Manitoba, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas, and along the gulf through Tamaulipas and most of Vera Cruz. It then veered inland to Oaxaca, Mexico on November 30 and December 1 (Figure 1).

Location data for A33 were received every hour for all 24 hours on 45 of the 69 days (Tables 1a-1d). In all, 1565 signals (94.5%) were received from a potential total of 1656 hours, as the vulture traveled 5014 km in 69 days. The number of hours of data received on the remaining 24 days ranged from 16 to 23. Three travel days, two of them in important locations, one at the Nebraska-Kansas boundary and the other during the final day in Oaxaca when the vulture presumably died, had an inadequate number of signals to determine hourly distances (7 signals on October 7, 16 on November 19, and 11 on the final day, December 1, each marked by “?” in Table 1). Only the total daily distance was known for those three days.

We designated 49 of the 69 days as travel days, i.e. days in which the vulture traveled more than 5.4 km in one hour. On 2 travel days A33 flew 1 hour, on 6 days it flew 2 hours, and on 4, 8, 9, 6, 8 and 2 days it flew for 3, 4, 5, 6, 7 and 8 hours, respectively. On seven of these travel days, interruptions midway during that day’s travel occurred for one (n = 5) or two (n = 2) hours. On average, A33 flew 4.3 hours during each travel day, or just over 3 hours per 24 hour period for the 69 days elapsed time, including the 20 rest days.

On five days (October 4, 9, 10 and 21, and November 6), the vulture traveled more than 200 km. Only five

Table 1a. Daily speeds and altitudes of vulture A33 in 2007, Saskatchewan to Manitoba

Transmitter 65543 A33 Patagial tag right wing

DATE	hrs of data	start hour	finish hour	hrs >5.4km	hrs no movt	daily distance (km)	max hourly distance (km)	L	highest altitude ASL (m)	hr of highest altitude	lowest altitude at night (m)	approx height above ground (m)	# days rest	# days travel	av km/ day total 69days (km)	av max height above ground
24/9	24	1000	1500	3	2	43	17		1056	1400	590	466				
25/9	24	1100	1600	5		66	27		879	1300	534	345				
26/9	24			0		8	5	L	590		527	63				
27/9	24	1100	1300	2		28	7	L	612	1300	528	84				
28/9	24			0		19	5	L	548	1000	508	40				
29/9	24	900	1100	2		87	50	L	557	1000	485	72				
30/9	24	1200	1600	4		50	17		985	1300	588	397				
1/10	23	1200	1400	2		46	20	L	603		545	58				
2/10	24	1100	1700	6		178	33		1327	1300	532	795				
3/10	24	1100	1700	6		115	29	L	618		527	91				
4/10	24	900	1700	8		293	49		1395	1400	459	936				
Canada				38		933						3347	2	9	85	304

Table 1b. Daily speeds and altitudes of vulture A33 in 2007, North Dakota to Nebraska

Transmitter 65543 **A33 Patagial tag right wing**

DATE	hrs of data	start hour	finish hour	hrs >5.4km	hrs no movt	daily distance (km)	max hourly distance (km)	L	highest altitude ASL (m)	hr of highest altitude	lowest altitude at night (m)	approx height above ground (m)	# days rest	# days travel	av km/ day total 69days (km)	av max height above ground
5/10	24	1000	1300	3		46	15	L	500		461	39				
6/10	24			0		2	1	L	474		455	19				
7/10	21	900	1400	5		103	32		788		460	328				
8/10	24	1300	1500	2		28	14	L	480		375	105				
9/0	24	900	1700	7	1	354	67		848	1500	524	324				
10/0	21	1000	1700	7		268	48		1041	1300	405	636				
11/10	24	1400	1500	1		26	6		554		366	188				
12/10	23	1000	1600	5	1	86	10		912	1300	307	605				
13/10	22			0		11	4	L	364		289	75				
14/10	18			0		5	2	L	360		320	40				
15/10	22			0		0	0	L	317		298	19				
16/10	21			0		1	0	L	335		297	38				
17/10	22			0		1	0	L	355		245	110				
18/10	22			0		1	0	L	342		315	27				
19/10	24			0		5	2	L	364		353	11				
20/10	21			0		16	5	L	408		302	106				
21/10	7			?		201	?	?	337		323	14				
North Dakota - Nebraska				30		1154						2684	7	9	72	168

Table 1c. Daily speeds and altitudes of vulture A33 in 2007, Kansas to Texas

22/10	16			0		1	0	L	403		367	36				
23/10	24			0		1	0	L	395		384	11				
24/10	24			0		2	0	L	413		370	43				
25/10	24			0		2	0	L	407		391	16				
26/10	24	1300	1500	2		19	10		720	1400	537	183				
27/10	23	800	1600	8		187	38		1033	1400	290	743				
28/10	24	1000	1600	6		107	24		903	1200	213	690				
29/10	24	900	1600	7		82	16		629	1300	193	436				
30/10	24	1100	1500	4		46	17		625	1200	261	364				
31/10	24	1200	1600	4		65	16		732	1400	137	595				
1/11	24	800	1600	6	2	152	33		406	1500	172	234				
2/11	24			0		2	0	L	225		152	73				
3/11	24	1300	1600	3		60	22		890	1400	164	726				
4/11	24	1100	1500	4		48	11		774	1500	135	639				
5/11	24	1100	1500	4		42	12		788	1400	179	609				
6/11	24	900	1600	7		305	57		870	1100	113	757				
7/11	21	900	1600	6	1	94	26		443	1300	99	344				
8/11	24	1200	1600	3	1	46	13		792	1500	66	726				
9/11	24	1000	1600	5	1	56	16		825	1300	32	793				
10/11	22	1000	1100	1		15	6		326	1000	49	277				
11/11	17	1000	1100	1		13	8		753	1400	20	733				
12/11	24	1000	1200	2		26	11		707	1100	9	698				
13/11	24	1100	1600	5		88	25		600	1300	16	584				
14/11	24	1000	1700	7		108	20		654	1400	45	609				
15/11	24	1200	1700	5		186	50		639	1600	24	615				
Oklahoma - Texas				90		1753						11534	7	19	67	444

Table 1d. Daily speeds and altitudes of vulture A33 in 2007, Tamaulipas to Oaxaca

Transmitter 65543 **A33 Patagial tag right wing**

DATE	hrs of data	start hour	finish hour	hrs >5.4km	hrs no movt	daily distance (km)	max hourly distance (km)	L	highest altitude ASL (m)	hr of highest altitude	lowest altitude at night (m)	approx height above ground (m)	# days rest	# days travel	av km/ day total 69days (km)	av max height above ground
16/10	24	900	1600	7		132	24		463	1200	53	410				
17/10	24	900	1600	7		107	19		419	1100	67	352				
18/10	24	1100	1500	4		71	25		1003	1400	321	682				
19/10	16		?	?		62	?		358	700	102	256				
20/11	24	900	1400	5		63	14		517	1000	0	517				
21/11	24	1000	1500	5		73	20		483	1200	0	483				
22/11	24	900	1500	6		177	57		412	1300	13	399				
23/11	24	1100	1600	5		130	33	L	405	1600	309	96				
24/11	22	900	1600	7		82	18		558	1500	80	478				
25/11	24	1000	1400	4		104	27		501	1300	4	497				
26/11	24			0		3	1	L	49	700	0	49				
27/11	23			0		3	1	L	57	0	0	57				
28/11	23			0		2	0	L	45	0	0	45				
29/11	24			0		4	1	L	35	800	0	35				
30/11	23	1100	1400	3		35	10		336	1200	0	336				
1/12	11	?	?	?		126	?	L	292	2000	289	3				
Mexico				53		1174						4695	4	12	73	293
TOTAL				211		5014							20	49		

A-33 in 2007, Saskatchewan to Oaxaca. ? represents absent hourly data. L represents a low-altitude travel day within ~120 m of the ground. Hours are given in Central Standard Time, "24-hr clock."

Table 2 Distances and altitudes of vulture A-33, by region, Saskatchewan to Oaxaca

Region	Dates	# days rest	# days travel	max km/ day	total km	av km day	direct dist km	av km direct km	av max height above ground
SK, MB	24/9 - 4/10	2	9	293	933	85	781	71	304
ND. SD, NE	5/10 - 20/10	7	9	354	1154	72	864	54	168
KS, OK, TX	21/10 - 15/11	7	19	305	1753	67	1725	66	444
Mexico	16/11 - 1/12	4	12	132	1174	73	1032	65	293
Total		20	49	354	5014	73	4402	64	

of the 1565 recorded hours clocked a speed greater than 50 km/hr, with a maximum of 67 km/hr at 1500h on October 9. Four of these five occasions with higher speed were associated with higher than average elevations.

The highest altitude above sea level (1395 m) and the highest altitude above ground (936 m) occurred near Cartwright, MB on October 4. Later, the vulture traveled in near-continuous thermals along the Caribbean coast of Mexico (KLB). One might have expected it to fly at greater heights farther north, where it would soar and glide between thermals, rather than in the south where thermal streets often form and where there should be less circle soaring and inter-thermal gliding. The northerly location of the highest altitude is the only evidence that tends to support this hypothesis. However, in a further test, the *mean* of single daily *maximum* heights reached above ground, lumping both travel and rest days, was calculated: 304 m in Canada, 168 m over the Dakotas and Nebraska, 444 m over Kansas through Texas, and 293 m over Mexico (Table 2). The only *"travel days"*(in addition to the "rest days" with regularly low flights) that involved flights entirely below ~ 120 m above ground, were four in Canada and two in North Dakota (L in column 9 in Table 1). Similarly, the average distance per day, based on all 69 days, failed to show any appreciable change between the four regions: 85, 72, 67 and 73 km/day as the vulture moved southward (Table 2).

Direct-line distances, between the first and the final readings of each period (Table 2), were shorter, at 781 km for Canada (mean, 71 km/day), 864 km for North Dakota to Nebraska (54 km/day), 1725 km for Kansas to Texas (66 km/day), and 1032 km for Mexico (65 km/day), for a total-distance direct-line mean of 64 km/day.

An unexpected event was reported to the banding office by Bob Funke, a conservation officer/ game warden based at Fredonia, Kansas. He was called by farmer Walt Griffith, near Neosho Falls, because Griffith had observed a Red-tailed Hawk harassing a Turkey Vulture, and read its wing tag A33; the vulture then took refuge from the hawk by flying through a large open door into Griffith's machinery shed. Funke, on getting the call, rushed about 36 km to the Griffith farm and found the vulture hiding under a workbench. He extracted the vulture, and noticed to his surprise that the vulture also had a transmitter with antenna attached to its back. As Funke demonstrated the transmitter to the equally amazed farmer, the vulture slid out of his arms, flew out the door and went 16 km more before stopping for that night.

Discussion

For the first time in North America, we were able to calculate the hourly speed and altitude of a recently-fledged Turkey Vulture during its first southbound migration. As expected for a bird using thermals, almost all the southward travel of vulture A33 occurred during midday, usually between 900h and 1700h, during 49 'travel days.' The remaining 20 days presumably involved resting and eating, without southbound progress.

This vulture started south from the same deserted house as the 2004 vulture, H25. The southward migration path of A33 as far as Oaxaca (Figure 1) was almost identical to that of the 2004 vulture that wintered in Costa Rica. The 2004 vulture, H25, however, began the journey four days earlier, reached Oaxaca 22 days earlier, on 9

November, and covered 5316 km in 72 days (map in Houston et al. 2007). A33 averaged 64 km/day using a direct-line distance from start point to end point as compared to 74 km/day for the direct-line distance of H25 in 2004.

When rest days and travel days are pooled, A33 traveled an average of 73 km per day for 69 days. In spite of prevailing northwesterly winds, it surpassed 50 km/hr only five times, an hourly speed consistent with the soaring speeds of 40 km/hr reported by Coles (a vulture keeping pace with a railway train)[2] and the 55 km/hr reported by Kirk and Mossman.[7]

Another species that most often uses soaring-gliding flight rather than powered flight during migration is the Golden Eagle. The eagle's travels resembled those of vultures in several ways. Juveniles making their first flight south from Alaska reached only a maximum of 261 km/day in 1997, but 472 km/day in 1999, only moderately greater than the 354 and 305 km of the juvenile vulture's longest day's travel. The eagles also took advantage of thermals for midday travel and employed stopovers of from 2 to 19 days.[9]

In contrast, raptors that use flapping flight rather than soaring-gliding flight have the potential to travel faster. A combined, pooled group of individual Saskatchewan Swainson's Hawks with leg bands, each encountered at one terminal site only, together suggest a coverage of over 10,000 km in 54 days, an average of 185 km/day, arriving in northern Argentina as early as November 7.[10] An adult Saskatchewan Swainson's Hawk, fitted with a Doppler transmitter and followed every day or two for the entire journey, required 96 days to reach its wintering grounds in La Pampa province, Argentina on 30 November, a distance of 10,415 km in 96 days, averaging 108 km/day.[4] An adult Saskatchewan Osprey fitted with a Doppler transmitter covered a remarkable 1145 km in two days, from Rapid City, South Dakota to Matador Texas, and it also averaged a healthy 287 km/day for its 19 days of major southbound travel.[6] However, the next year the same Osprey required 9 days longer to make its trip to Costa Rica (Houston 2004).[3]

Acknowledgments

Ralph Matzner, the landowner, and Ken McDaid, a neighbor, have kept a watchful eye on the vulture nest site near Ranger each summer since 2002. Myron Barton devoted several days to clearing underbrush to reach the GPS location of the fallen-off transmitter, 65543, which was found, on the third and final search, by Pieter Stoffel on August 2, 2006, and subsequently refurbished by Microwave Telemetery Inc. Michael J. Mossman posed important questions that have improved the value of this paper. Claude Bouchard, Professor Emeritus, Université de Laval, wrote the distance-measuring program Grinwich, adding an extra calculation to provide a daily as well as an hourly distance.

We thank Dr. Paul Howey for valuable information and assistance and for waiving the fee for Groundtrack when his company refurbished the transmitter, which thus became available for re-use in 2007. Sarkis and Bobbye Acopian supported the purchase of the PTT and other Hawk Mountain Sanctuary aspects of the project.

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EASTERN WOOD-PEWEE NEST IN SOUTHEASTERN SASKATCHEWAN

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On the morning of 21 June 2008, I carefully identified a female Eastern Wood-Pewee building a nest at a former provincial picnic site in the Souris Valley along Highway # 9. It was hovering to pick dry tops of brome grass (*Bromus* sp.) and then returned to integrate this material into the rim of the nearly completed nest. The nest was 'saddled' on the larger branch of a large Green Ash (*Fraxinus pensylvanica*) within a mature grove of Box Elder (*Acer negundo*) and American Elm (*Ulmus americanus)* with an open understory. The male called sporadically nearby.

These were two of five Eastern Wood-Pewees recorded that day along the route from Roche Percee to Hwy # 9. I saw another pair interact at the former Roche Percee Provincial Recreation Site and a single bird calling 5.5 km to the east at Longney's Crossing.

This species is a resident in smaller numbers in the riparian areas along the Souris River including the specific area of this nest. Other general areas where I and others have observed this species include Moose Mountain Provincial Park, the eastern Qu'Appelle Valley, Good Spirit Provincial Park and Duck Mountain Provincial Park. There have also been scattered reports from several other locations.

Alan R. Smith describes the Eastern Wood-Pewee as 'a rare but regular summer resident in mature deciduous forests' mainly in the Southeastern area.[2] Although it has long been accepted as a possible/probable breeding species, this is apparently the first nest record of a species that was first observed in Saskatchewan by Ernest Thompson Seton at Runnymede on 14 June 1884.[1]

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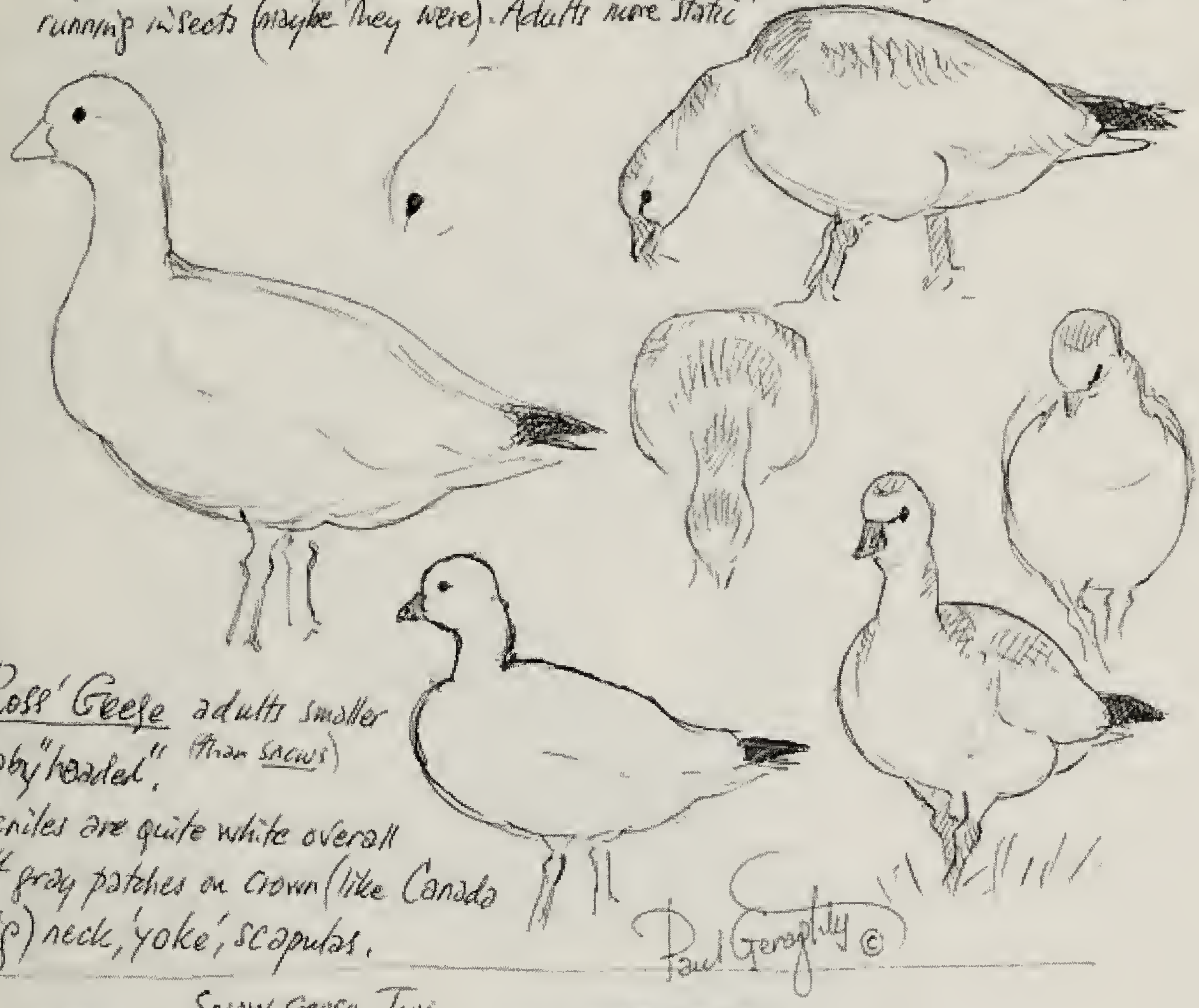
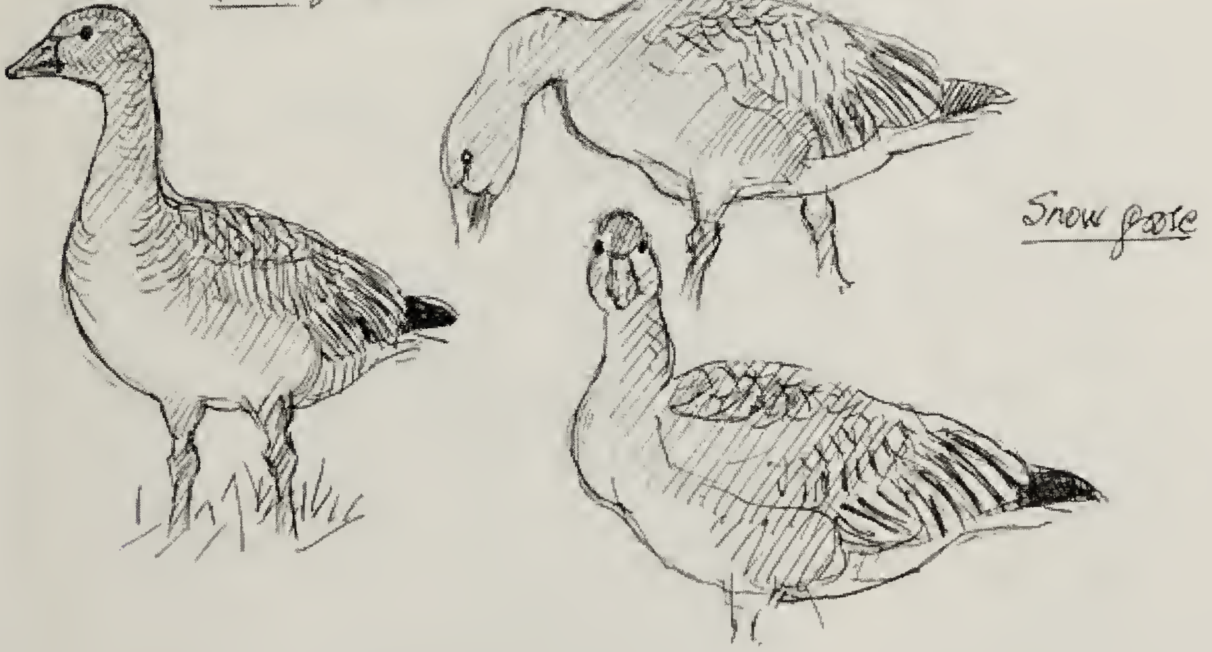
② Oct 16/02 R's Geese intermingled c̄ SNOWS, & "evanescent"-you see them definitely (1 – 3 prs) & then 'loose' them among the Snows again, espec. when they head down to feed. Juv. mkdly whiter than Snows overall, & "run" abt. feeding, as if chasing running insects (maybe they were). Adults more 'static'


Paul Geraghty ©

Ross' Geese adults smaller & "baby"headed". (than Snows)
Juveniles are quite white overall c̄ soft gray patches on crown (like Canada Gosling) neck, 'yoke', scapulas.

Snow geese Juv.



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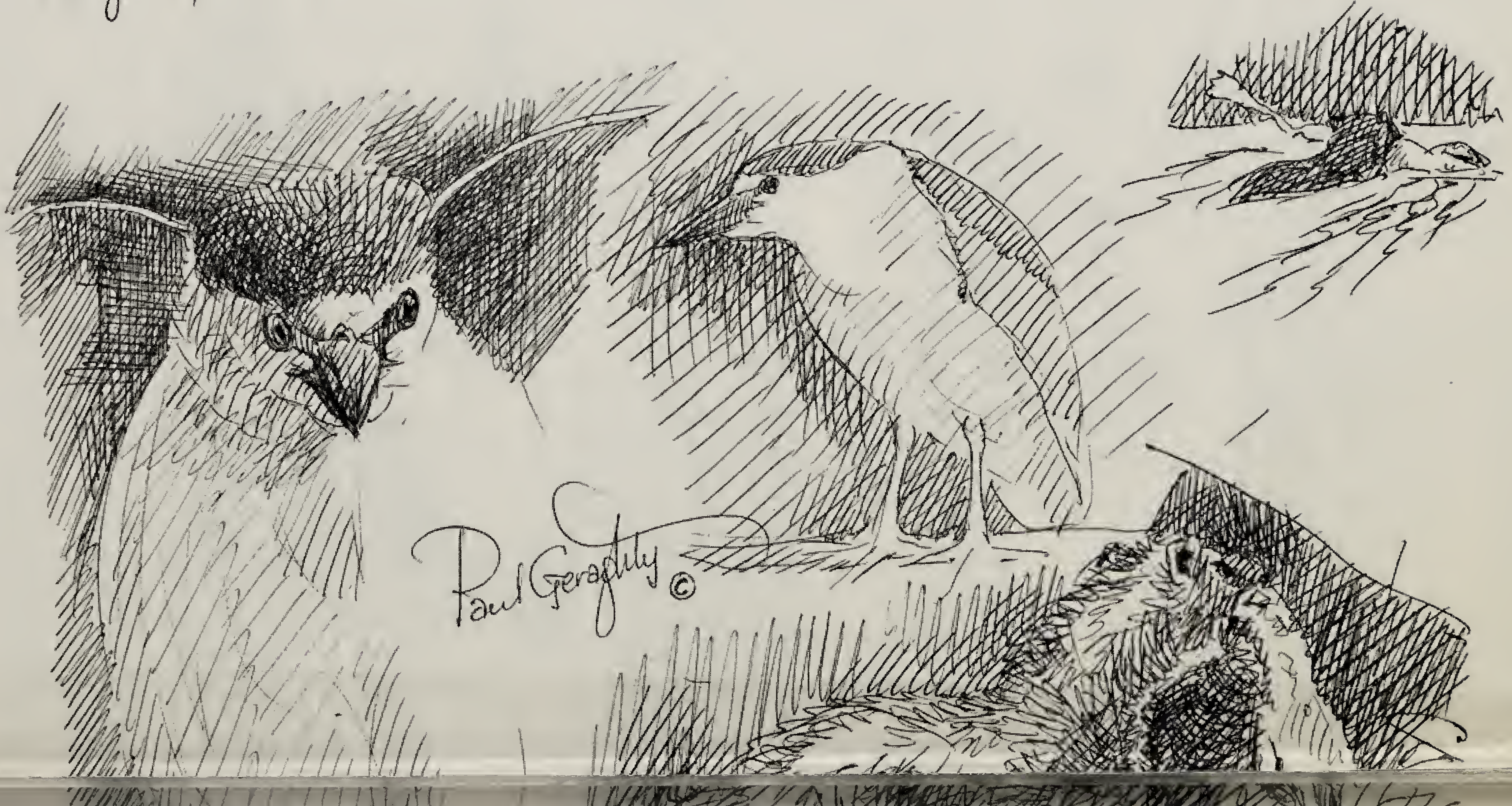
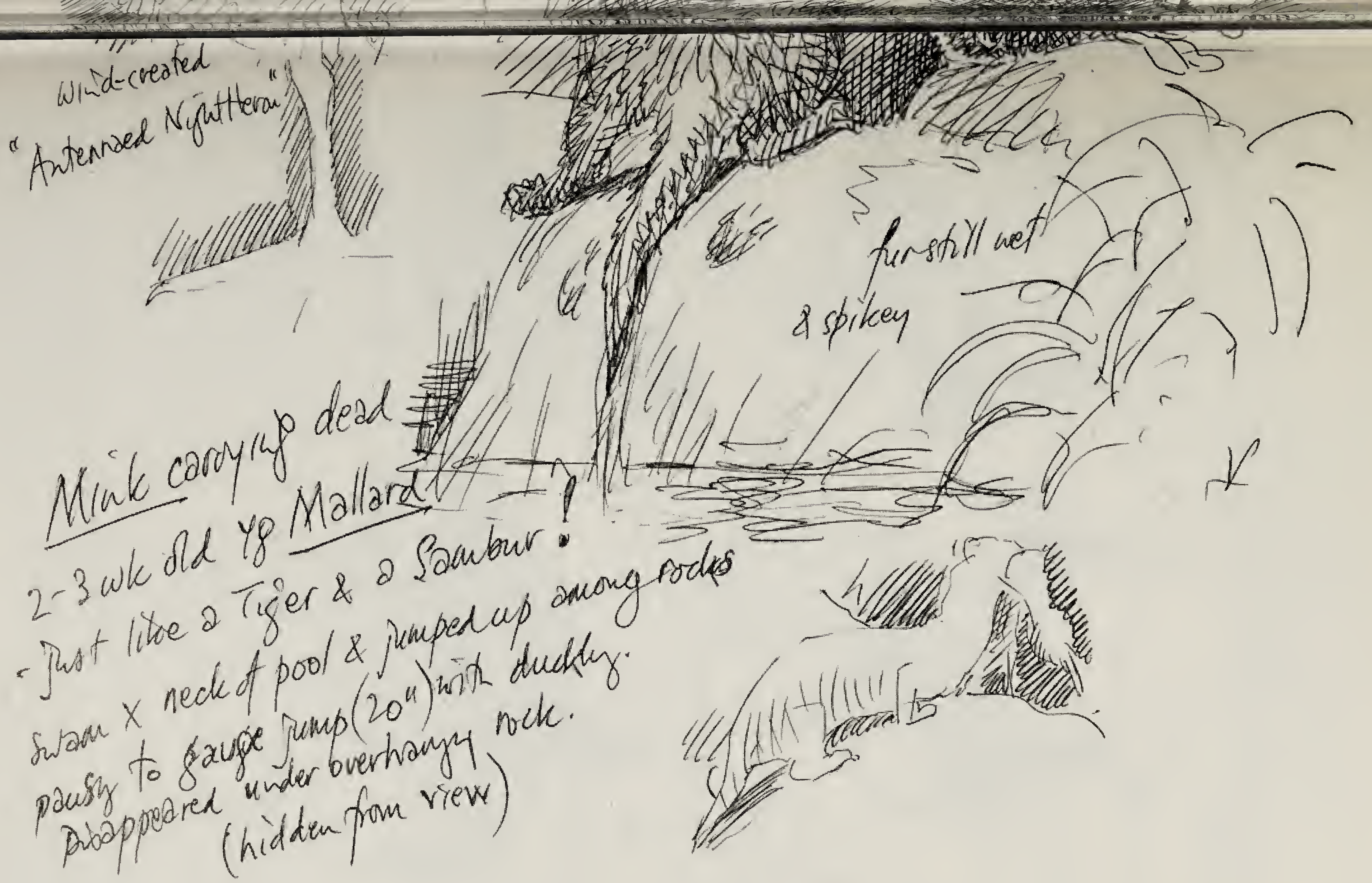


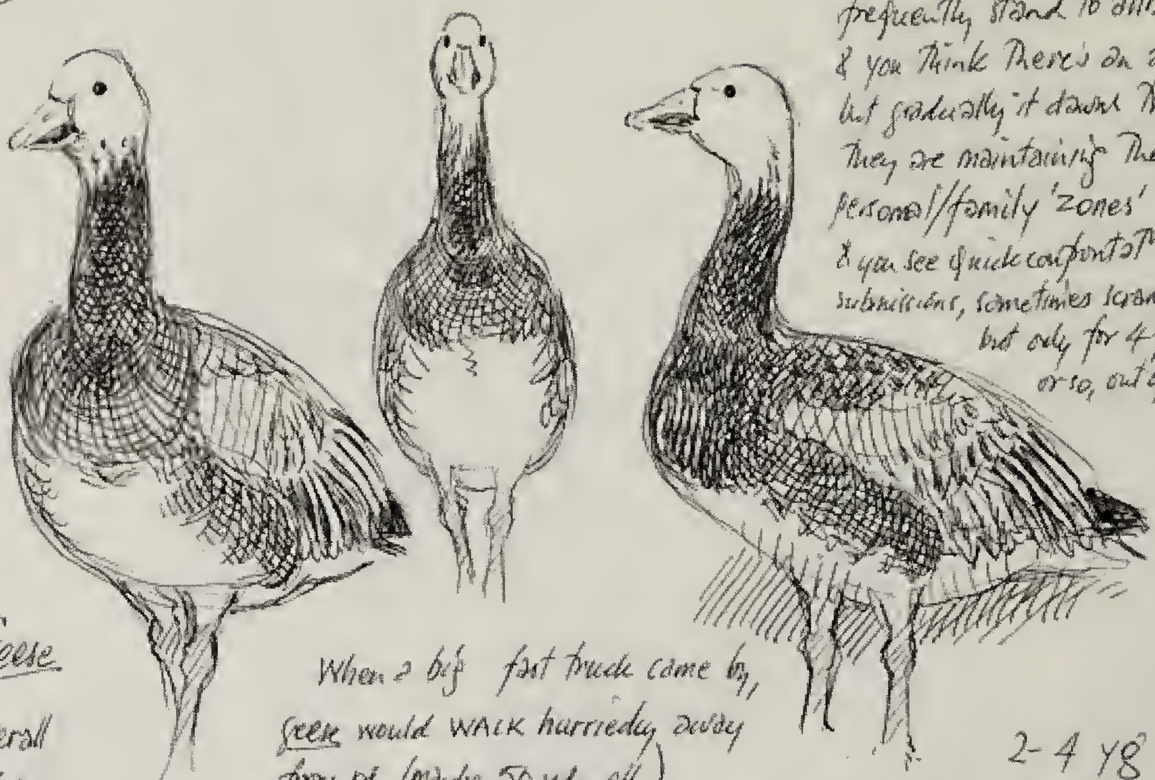
Paul Geraghty ©

Blue Jay



Mink carrying dead
2-3 wk old yg Mallard
-Just like a Tiger & a Sambur!
Swam x neck of pool & jumped up among rocks
pausing to gauge jump (20") with duckling.
Disappeared under overhanging rock.
(hidden from view)

③
Oct 16/02



ad. Blues + Snows
frequently stand to attn
& you think there's an alarm
but gradually it dawns that
they are maintaining their
personal/family 'zones'
& you see quick confrontatns. &
submissions, sometimes scrambles
but only for 4 feet
or so, out of 'zone'

Blue Geese

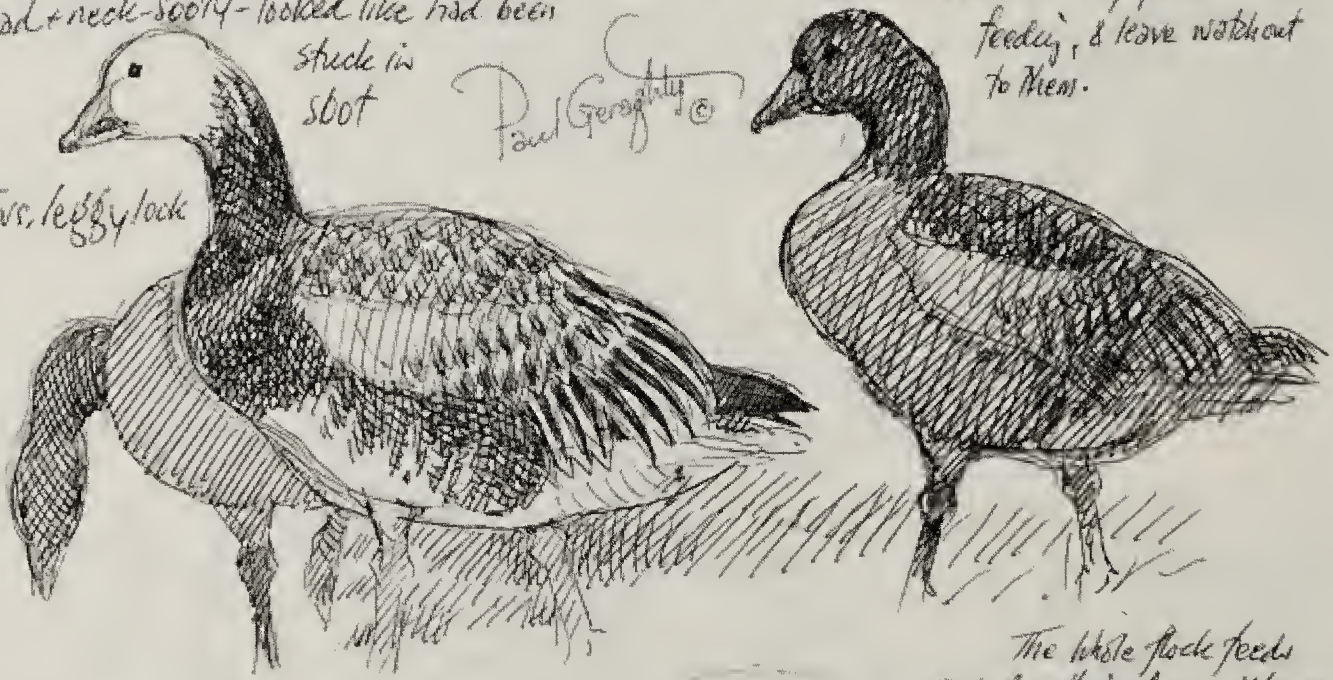
Juvs, overall
brownish gray.
Head + neck-sooty - looked like had been
stuck in
soot

When a big fast truck came by,
geese would WALK hurriedly away
from rd. (maybe 50 yds off)

2-4 YG.
sometimes loosely follow ads.
feeding, & leave watchout
to them.

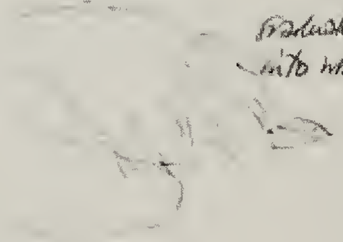
Paul Geraghty ©

Juvs, leggy look



Juv. dk legs   ad. pink legs.

The whole flock feeds
gradually walking forward Wwards,
into wheat stubble, some fly into
it.



THE NATIVE CURRANTS AND GOOSEBERRIES (*Ribes* SPECIES) IN SASKATCHEWAN

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Wild currants and gooseberries are frequently encountered, small shrubs in brushy and wooded sites almost throughout Saskatchewan. This account may help to stimulate interest in, and better enlighten local amateur botanists and naturalists about, our native species of these berry shrubs, their identification, characteristic habitats, and known distributions in Saskatchewan. More detailed species descriptions may be found in such regional floral manuals as *Budd's Flora*, *Flora of Alberta* or *Flora of the Prairie Provinces*.[1,3,16]

Currants and gooseberries are members of the genus *Ribes*, which today is usually placed in its own limited family Grossulariaceae, although formerly was often included in a broader Saxifrage Family, Saxifragaceae. About 160 species are recognized worldwide in the genus *Ribes*. These are mostly distributed in temperate to arctic regions of the Northern Hemisphere, but there are some South American *Ribes* species occurring in the Andes Mountains and ranging southward to Patagonia and Tierra del Fuego. A total 54 species of *Ribes* are recorded in North America north of Mexico,[15] 25 species in Canada,[15, 16] and 8 in Saskatchewan.[8,9]

Saskatchewan's native currants and gooseberries are relatively small shrubs, mostly less than a meter tall, although sometimes reaching a height of 2 m (*e.g.* Golden Currants). The ripened berries are usually more colorful and conspicuous than the mostly smallish, non-showy flowers.

The older stem bark of many *Ribes* species appears "shreddy" with a flaking off of small, ragged strips. Stems of gooseberries, in contrast to most currants, are usually characterized by arming structures (spines and/or prickles). (In botanical terminology, "spines" are firmer structures containing vascular tissue that are borne at stem nodes, and represent modified leaves. Conversely, "prickles" are weaker arming structures that represent cortical outgrowths lacking vascular tissue and occurring along the stem-internodes. The more general and less definitive term "bristles" or "bristly" is often used in referring to the presence of either, or both, spines and prickles, and also to stiffish hairs.)

Leaves of *Ribes* species are attached singly on the stem in an alternate arrangement. They are stalked (petioles present), with the blades simple (*i.e.*, undivided) and palmately lobed and veined. (Figure 1).

The flowers range from only a few borne in small corymbs or short racemes, to many borne in more elongated racemes. The individual flowers consist of 5 sepals that are often petal-like in color and texture, 5

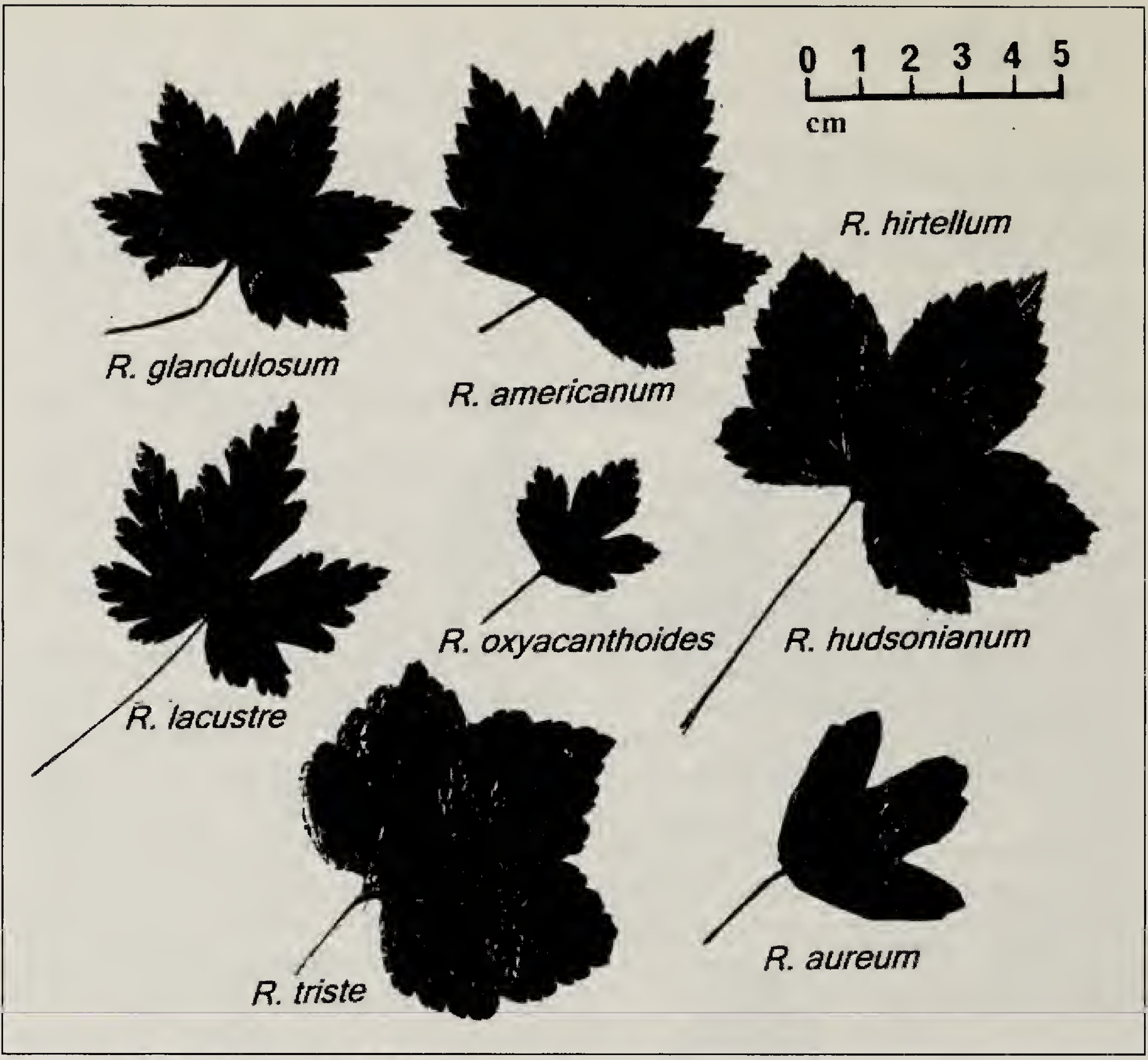


Figure 1. Leaf shapes of Ribes *species.*

smaller petals, and 5 stamens that alternate with the petals. The single pistil consists of 2 fused carpels, with 2 stigmas terminating the style that is sometimes upwardly split. The ovary is inferior, with the other flower parts epigynous (*i.e.* arising above the ovary). *Ribes* flowers are characterized by a fusion of the lower portions of the calyx, corolla and stamens to form a "hypanthium" attached below to the ovary-wall and extending upwards above the ovary as a concave disk, cup, or cylinder. The free sepals, petals and stamens arise from the rim of the hypanthium. The 1-chambered ovaries bear multiple ovules, attached along 2 vertical lines on the ovary's inner walls (= parietal placentation). The ovules mature into the seeds, and the ovaries mature into juicy, several- to many-seeded, berries. The seeds are 2-3 mm long, angular, and usually reddish (Figure 2). The chromosome number of 2n = 16 has been reported for various *Ribes* species, including those in Saskatchewan.[15,16] Within the genus *Ribes*, the gooseberries are characteristically distinguished from the currants by (1) the presence of distinct joints on their flower-stalks (pedicels) where the berries eventually become detached (disarticulate), (2) their more numerous flowers borne in longer raceme-type inflorescences, and (3) their stems usually bearing at least some prickles and/or spines. A partial exception to this general rule is our Prickly Black Currant, *R. lacustre,* — a currant, but with prickles and

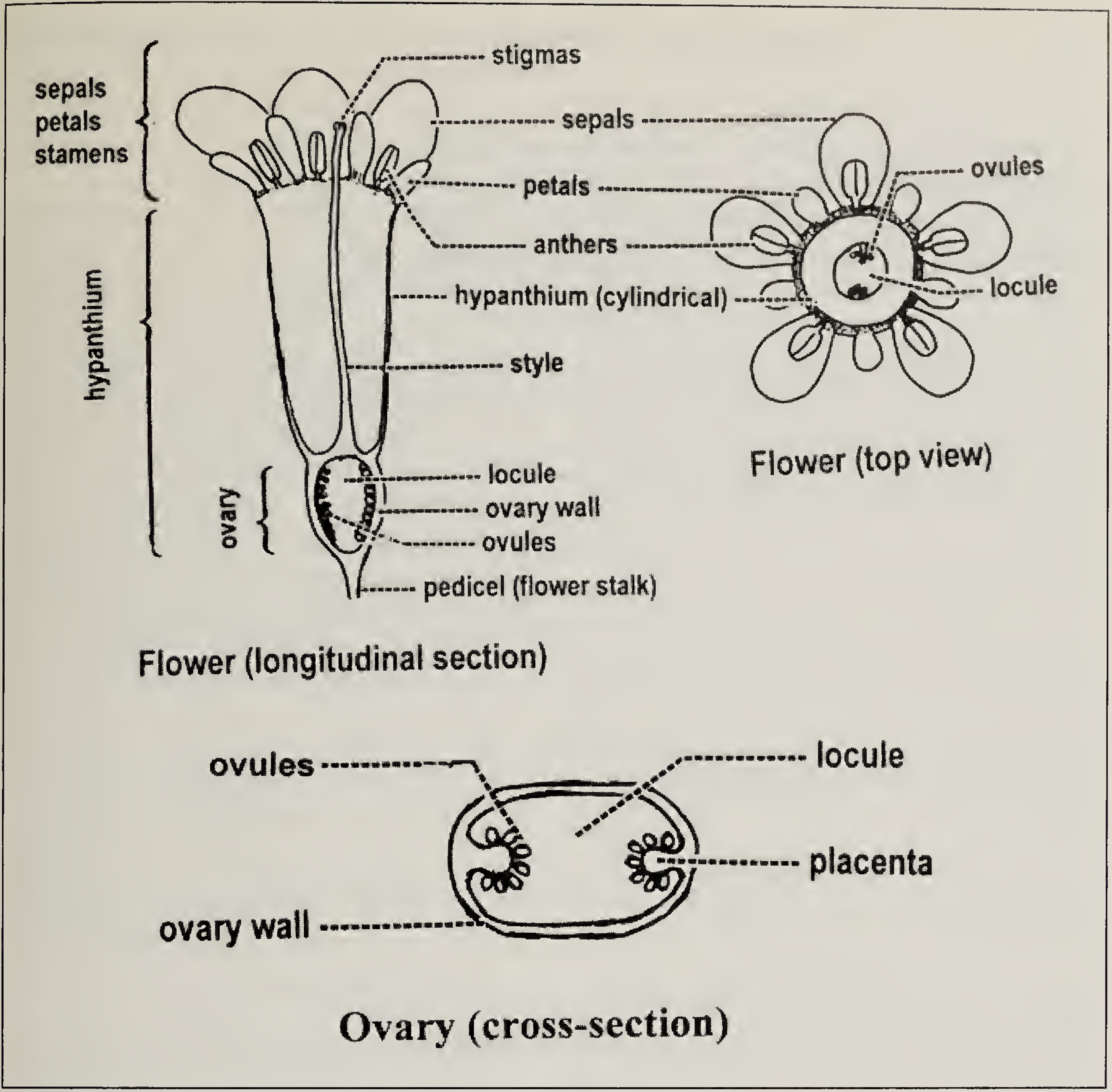


Figure 2. Generalized flower parts of Ribes *species.*

spines. Modern molecular studies have continued to uphold the distinction long made between gooseberries and currants.[19,20,25]

The berries of currants and gooseberries are edible, but some species are distinctly more tasty than others. With regard to ethnobotanical usage in Saskatchewan, Leighton reported that the Woods Cree would eat fresh berries of Canada Gooseberries (*Ribes oxyacanthoides*) and Skunk Currant (*R. glandulosum*), and made a jam with the berries of Northern Black Currant (*R. hudsonianum*) that was eaten with fish, meat or bannock.[12] Marles reported that the Chipewyan of northern Saskatchewan occasionally ate the fresh berries of Canada Gooseberries (*R. oxyacanthoides*) and of Northern

Ribes glandulosum *Anna Leighton*

Black Currant (*R. hudsonianum*), and made the former into a jam.[14] The berries of Northern Black Currant (*R. hudsonianum*) were also mixed with raspberries to make a potent wine. Regarding medicinal usages, Marles reported that the Chipewyan mixed the roots of Northern Black Currant (*R. hudsonianum*) with other roots to make a cough remedy tea, and Leighton indicated that stem-sections of Canada Gooseberries (*Ribes oxyacanthoides*) and Northern Black Currant (*R. hudsonianum*) would be made into a decoction to treat sickness after childbirth.[12,14]

Various species of currants and gooseberries have been cultivated as food sources in Europe for at least four centuries. In North America today, the most frequently planted gooseberries are the introduced European Gooseberry (*Ribes uva-cripa* L.) and the native Hairy-stemmed Gooseberry (*R. hirtellum*). The currants most often grown are the introduced European Black Currant (*Ribes nigrum* L.), and various hybrid derivatives of the North American indigenous Northern Red Currant (*R. rubrum* Pursh). Also involved in the horticultural trade are such North American native currants as *R. sanguineum* Pursh, *R. speciosum* Pursh, and *R. aureum* Pursh var. *villosum* Pursh, the latter possibly as much for its attractive golden blossoms as its edible berries.[15] It should be noted that the small dried fruits of commerce known as "Zante currants" or "dried currants" are not really true currants belonging to the genus *Ribes*, but derived from a grape species, *Vitis vinifera.* The early 20th century finding that various *Ribes* species were alternate hosts for several rust-caused plant diseases, most particularly of pine blister-rust, resulted in some North American jurisdictions banning their cultivation.[15] Although several introduced *Ribes* species have been grown in Saskatchewan, no records are known of these escaping and becoming naturalized here.

Despite updating by incorporating phylogenetic data from recent molecular research,[19,20,25] a modern taxonomic conspectus of *Ribes* appears little changed from former traditional ones. The treatment given here largely follows that in the Flora of North America, Volume 8.[15] The Saskatchewan distribution maps provided in Figure 4 for each *Ribes* species in the province, indicate locality sites of verified specimens filed in recognized herbaria – mainly in the Fraser Herbarium at the University of Saskatchewan (SASK) and the Ledingham Herbarium at the University of Regina (USAS). Unverifiable sight records have not been included. Figure 3 shows various place names and Map 9 in Figure 4 shows the general phytogeographic regions in the province.

Background information for this article was gleaned from multiple sources, [11,15,17,24] including regional and national floral manuals (not all individually referenced), plus the author's four decades of Saskatchewan field experience.

Ribes hudsonianum Anna Leighton

IDENTIFICATION KEY TO SASKATCHEWAN *RIBES* SPECIES:

1a. Flower stalks (pedicels) jointed below the ovary, where the mature berries disarticulate; flowers more numerous, (5-)6-50, in ± elongated racemes; stems lacking spines and prickles (except in *R. lacustre*); leaf-blade undersurfaces sometimes with resin-dots; ovaries and berries sometimes with gland-tipped hairs (Currants). - **(to 2)**

1b. Flower stalks (pedicels) not jointed below the ovaray; flowers fewer, 1-3(-4), in small corymbs or short racemes; stems mostly with at least some spines and/or prickles (sometimes lacking in *R. hirtellum*); leaf-blade undersurfaces not resin-dotted beneath; ovaries and berries not glandular-hairy (Gooseberries). - **(to 7)**

2a. Stems with internodal prickles and nodal spines; pedicels; ovaries and berries ± densely covered with reddish gland-tipped hairs; leaf blades usually deeply lobed over halfway to base, the lobes incised-toothed. - - ***R. lacustre***

2b. Stems lacking prickles and spines; ovaries and berries lacking gland-tipped hairs (except in *R. glandulosum*); leaf blades mostly less deeply lobed and not incised-toothed. - **(to 3)**

3a. Leaf blade undersurfaces with yellowish resin-dots; mature berries dark-purple to black. - **(to 4)**

3b. Leaf blade undersurfaces lacking resin-dots beneath (or these sparsely present in *R. aureum*); mature berries red or yellow (or sometimes purplish to black in *R. aureum*); leaf blades shallowly lobed not more than halfway to base. - **(to 5)**

4a. Pedicels shorter than their subtending bracts, the bracts to 10 mm long, persisting; ovary and berry surface lacking resin-dots; sepals reflexed, creamy to greenish-white or somewhat pinkish, sparsely hairy to essentially glabrous, narrowly oblong-spatulate to nearly oblong; hypanthium cylindrical to bell-shaped, about 4 mm long, somewhat longer than broad, about equal to the sepal length. - ***R. americanum***

4b. Pedicels much longer than their subtending bracts, the bracts to 3 mm long, early-deciduous; ovary and berry surfaces with at least some yellowish resin-dots; sepals widely spreading, white, densely hairy, triangular to ovate-lanceolate or oblong-elliptic; hypanthium more cup-shaped or disc-shaped, about 1 mm long, mostly broader than long, much shorter than the sepal length. - ***R. hudsonianum***

5a. Flowers (hypanthium, sepals and petals) bright golden-yellow, the petals usually reddish tipped, often turning orange with age; hypanthium a cylindrical tube about 4 mm long, much longer than broad, about twice as long as the sepals; berries yellowish or red, to purple or black; pedicels and inflorescence branches lacking glandular hairs; leaf blades glabrous, the lobe margins nearly entire. ------------------------------------ ***R. aureum***

5b. Flowers greenish-purple, reddish, white or cream-coloured, but not bright yellow; hypanthium disc- to shallowly cup-shaped, broader than long at summit, shorter than the sepals; berries red; pedicels and inflorescence branches sparsely to densely covered with glandular hairs; leaf blades short-hairy, at least on veins beneath, the lobe margins distinctly toothed. - -- **(to 6)**

6a. Ovaries and berries bristly with reddish gland-tipped hairs; petals white to pinkish, round-tipped; racemes ascending; leaf blades lobed about halfway to base, the lobes triangular, with acute tips, and serrate margins. ---- -- --- ***R. glandulosum***

6b. Ovaries and berries smooth, lacking gland-tipped hairs; petals reddish-purple, with tips truncate or shallowly notched; racemes drooping; leaf blades more shallowly lobed, the lobes broadly triangular, with obtuse or broadly acute tips, and coarsely crenate-dentate margins. ------------- ***R. triste***

7a. Middle and upper internodes of fruiting stems only sparsely if at all prickly; nodal spines less than 1 cm long; stamens 2—5 times as long as petals, the anthers 0.2—0.3 mm long, reaching well beyond the petal tips; sepals erect, becoming recurved in age, leaf blades and floral bracts glabrous to sparsely soft-pubescent beneath, but not glandular-hairy; petioles pilose, not glandular-hairy; leaf-lobe apices acute; inflorescences are pendent corymbs, 0.5—1.5 cm long; berries smaller, 6—7 mm diameter. -------- -- ***R. hirtellum***

7b. Middle and upper internodes of fruiting stems mostly quite densely and permanently prickly; the 1—4 nodal spines stouter, mostly 1 cm or longer; stamens as long as petals, the anthers 0.5—1.3 mm long, reaching only to the petal tips; sepals spreading to somewhat reflexed; leaf blades and floral bracts ± densely pubescent and glandular-hairy; petioles ±densely glandular-hairy; leaf-lobe apices usually obtuse; inflorescences are spreading racemes, 2—3 cm long; berries larger, 7—16 mm diameter. - - - --- ***R. oxyacanthoides***

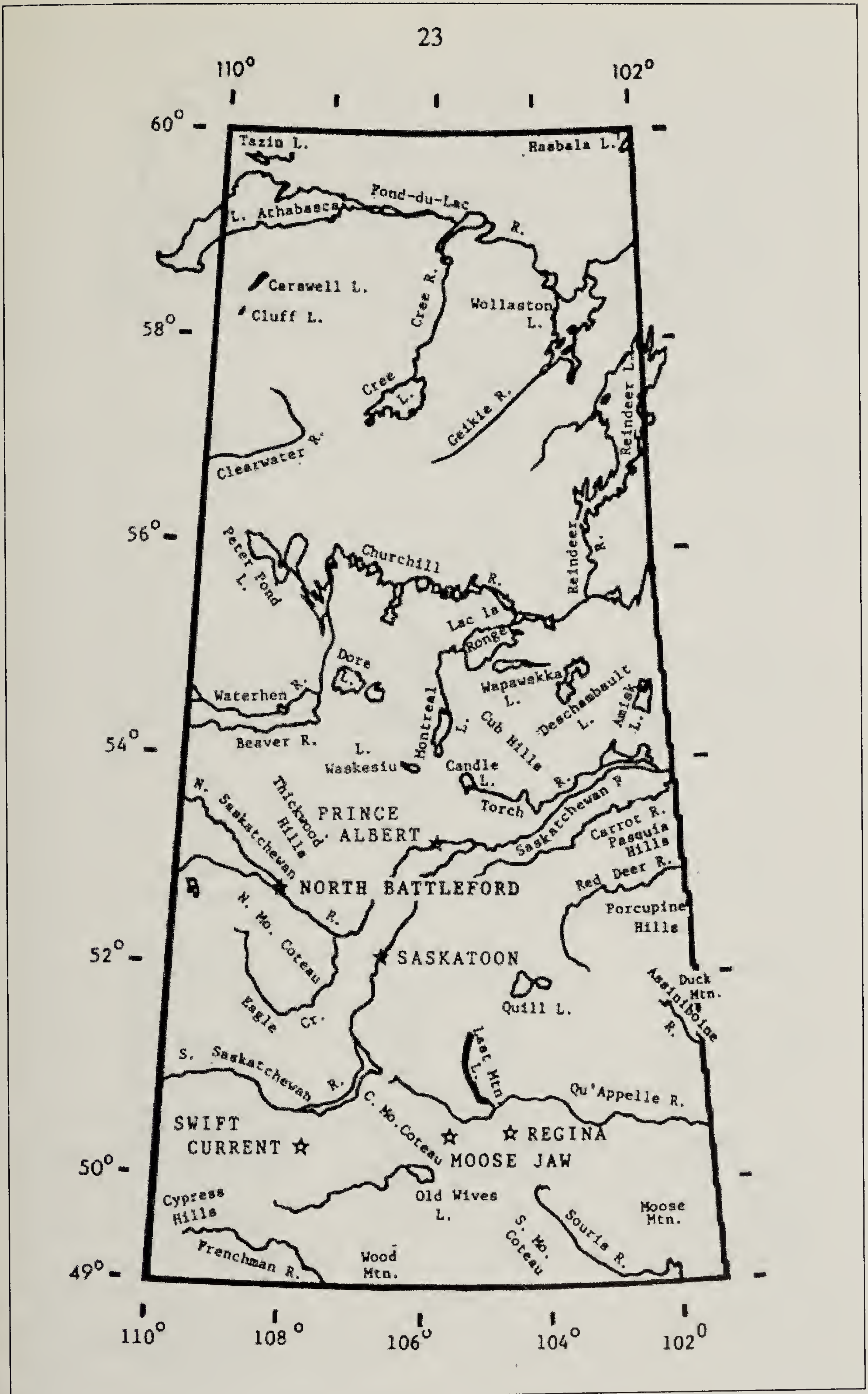
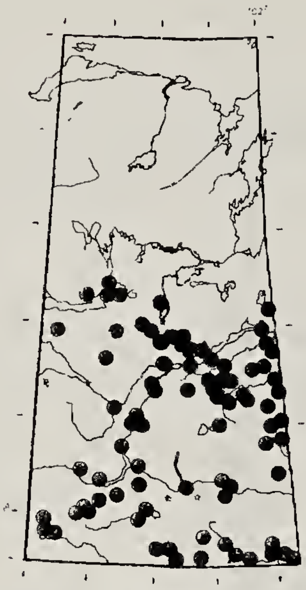
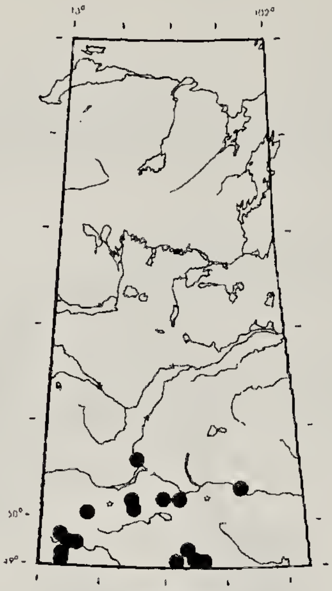


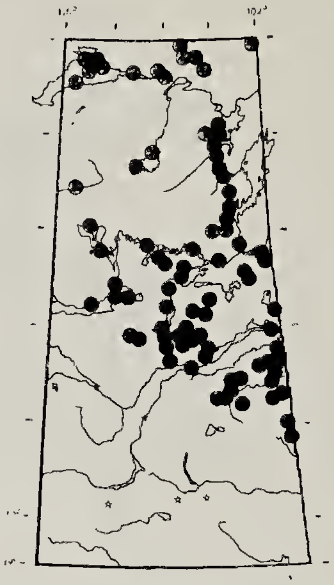
Figure 3. Map of Saskatchewan with place names.



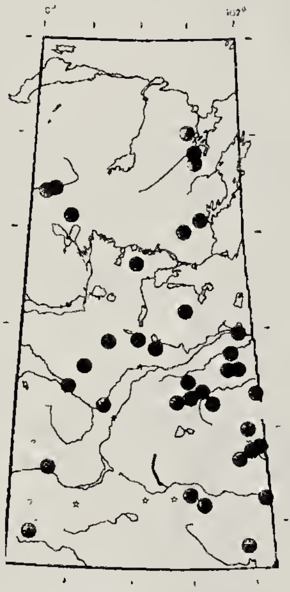
Map 1.
Ribes americanum



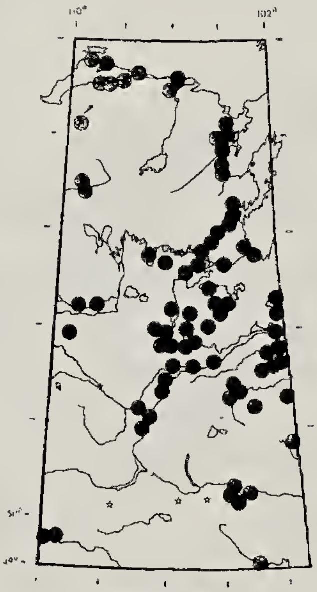
Map 2.
Ribes aureum



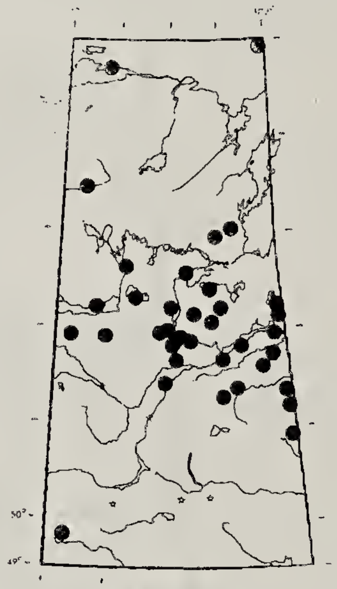
Map 3.
Ribes glandulosum



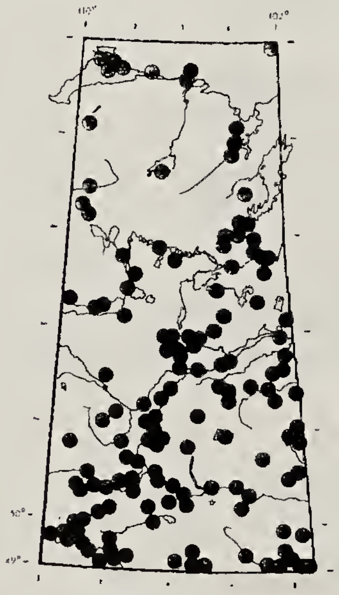
Map 4.
ibes hirtellum



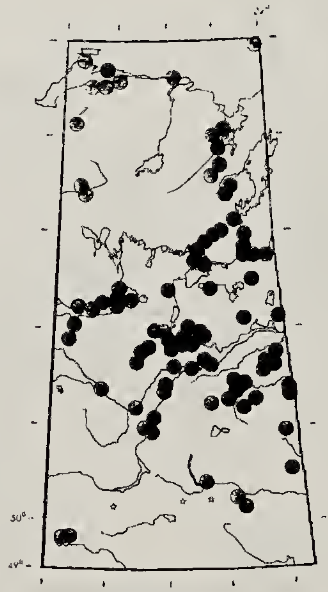
Map 5.
Ribes hudsonianum



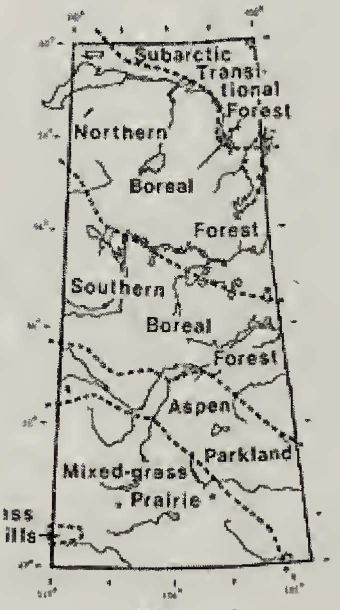
Map 6.
Ribes lacustre



Map 7.
Ribes oxyacanthoides



Map 8.
Ribes triste



Map 9.
Phytogeographic
Regions

SASKATCHEWAN SPECIES:

1. ***Ribes americanum* P.Mill. – AMERICAN BLACK CURRANT** (Wild Black Currant). [Synonyms: *R. floridum* L'Her.; *R. recurvatum* Michx.]. This is a common species in the southern half of Saskatchewan, extending north to northern Montreal Lake and Beaver River at about 55N latitude. Its characteristic habitat is mesic to moist shrub-thickets, open woods, woodland edges, ravine-slopes and stream banks. Map 1.

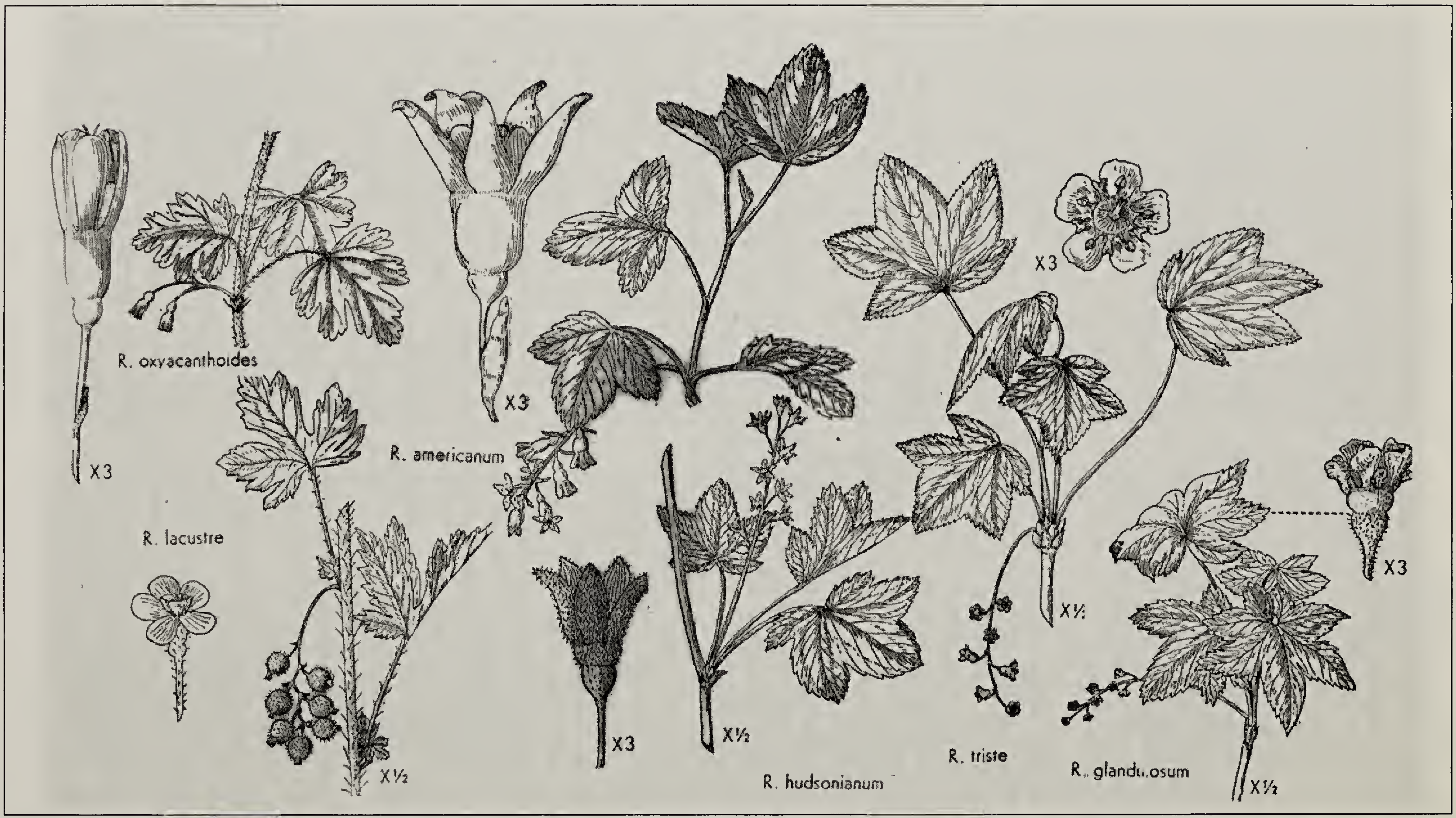
2. ***Ribes aureum* Pursh var. *aureum* – GOLDEN CURRANT.** [Synonym: *R. odoratum* auct. non Wendl.]. This is a relatively uncommon to rare species in southwestern to south-central Saskatchewan, found mostly on shrubby or open-wooded streambanks and ravine slopes. Our native variety is a close relative of the frequently cultivated Golden Currant, *Ribes aureum* Pursh var. *villosum* DC. [*R. odoratum* Wendl.], a plant native in the United States south of Saskatchewan, much used in the horticultural trade. The latter is distinguishable from our native *R. aureum* by its more conspicuous flowers resulting from the longer hypanthia extending over twice the length of the sepals. There are no known records of the cultivated variety *villosum* having escaped from cultivation and becoming naturalized in Saskatchewan. Map 2.

3. ***Ribes glandulosum* Grauer – SKUNK CURRANT.** This common and widespread species occurs throughout the Boreal Forest regions of northern Saskatchewan, extending southward in the Pasquia Hills, Porcupine Hills and Duck Mountain regions of east-central Saskatchewan to about 52N latitude. Characteristic habitats of the species are moist woods, clearings, and rocky shores. Map 3.

4. ***Ribes hirtellum* Michx. HAIRY-STEM GOOSEBERRY.** [Synonyms: *R. oxyacanthoides* L. var. *hirtellum* (Michx.) Scoggan; *R. o.* var. *saxosum* (Hooker) Cov.; *R. saxosum* Hooker]. This species is relatively frequent in the Aspen Parkland and Boreal Forest regions of Saskatchewan, ranging from the southeastern corner of the province, northward to Clearwater River (nearly 57N latitude) in the west, and to near Wollaston Lake (ca. 58N latitude) in the east. It most characteristically inhabits moist, often rocky woods, shrub-thickets, and clearings. This species is closely related to Canada Gooseberry (*Ribes oxyacanthoides*), and, when distinguished from the latter, has often been treated at an infraspecific level under that species as either var. *hirtellum* or var. *saxosum*. Map 4.

5. ***Ribes hudsonianum* Richards. – NORTHERN BLACK CURRANT** (Hudson Bay Currant). [Synonyms: *R. hudsonianum* var. *petiolare* (Douglas) Jancz.; *R. petiolare* Douglas]. This common and widespread species in Saskatchewan occurs in the Cypress Hills, Aspen Parkland, and Boreal Forest regions of the province. Characteristically, it inhabits rich moist woods. In overall appearance, especially of the leaves and berries, it is similar to the Wild Black Currant, *R. americanum,* but can be distinguished consistently by the characters given in the key. Map 5.

6. ***Ribes lacustre* (Pers.) Poir. – PRICKLY BLACK CURRANT** (Swamp Black Currant). This common forest species is characteristic of moist to wet woods, and occurs mostly in the Cypress Hills and Southern Boreal Forest regions of Saskatchewan, although it has been sporadically recorded farther northwards to Waddy Lake and the Clearwater River (ca. 57N latitude). Map 6.



Six Saskatchewan Ribes species (Reprinted by permission from The New Britton and Brown Illustrated Flora of the Northeastern United States and Canada, Vol. 2, p. 277-279, Henry A. Gleason, Copyright 1952, The New York Botanical Garden, Bronx, New York.)

7. *Ribes oxyacanthoides* L. ssp. *oxyacanthoides* – CANADA GOOSEBERRY (Northern or Wild Gooseberry). This frequent and widespread taxon in Saskatchewan ranges essentially throughout the province. It is characteristically found in mesic to moist woods, shrub-thickets and clearings. Map 7.

A closely related species, *Ribes setosum* Lindl. [often taken as *R. oxyacanthoides* subsp. *setosum* (Lindl.) Sinnott], was long accepted as present in this province by Saskatchewan botanists. Its recognition here was based on more narrowly cylindrical hypanthia (vs. obconic to narrowly bell-shaped hypanthia more widely flared upwards for typical *R. oxyacanthoides*), flowers over 1 cm long (vs. less than 1 cm), anthers at least 1 mm long (vs. less than 1 mm), and leaf-blades more deeply lobed to over halfway to base (vs. lobe-sinuses to less than halfway), and sepals elliptic-obovate (vs. oblong).[2,4,5,6,7,8,9,18,22] Recent studies,[19,21] and the *Ribes* treatment in Volume 8, Flora of North America,[15] now distinguish *R. o.* subsp. *setosum* from the typical subsp. *oxycanthoides*, on the basis of leaf-blades longer, pilose-hairy on lower surfaces instead of only short puberulent, and sepal tips rounded rather than blunt. Thus, this treatment excludes subsp. *setosum* from Saskatchewan.

8. *Ribes triste* Pallas – WILD RED CURRANT (Swamp or American Red Currant). [Synonyms: *R. rubrum* L. var. *propinquum* (Turcz.) Trautv. & Mey.; *R. rubrum* var. *alaskanum* (Berger) Boivin]. This is a common and widespread species occurring in the Cypress Hills, Aspen Parkland, and Boreal Forest regions of Saskatchewan, but apparently is absent in the true grassland region. It characteristically inhabits moist to wet woods and edges of bogs and fens. Map 8.

Saskatchewan reports of the natural occurrence of the Northern Red Currant, *R. rubrum* L., a native species farther east and south of us, and also sometimes cultivated, appear unsubstantiated, and probably are based on misidentified *R. triste.*

Acknowledgments

Gratefully acknowledged are the useful data compiled in term projects by former University of Saskatchewan biology students Dianne Turner and Denis Huel.[10,23]

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* * *

"This plant [Diervilla lonicera, or bush honeysuckle] interests botanists
because after the yellow flowers have been fertilized they change color to a
deeper yellow, 'to let the bees know that the larder is empty,'
Neltje Blanchan wrote."
Diana Wells, *100 Flowers and How They Got Their Names*, p. 223.

INSECTS

MONARCHS IN MY MILKWEED

SUSAN BROOKS, 711 7th Avenue North, Saskatoon, SK, S7K 2V3

It had taken ten years but finally, after I had abandoned all hope, they came! Sunday, June 24, 2007, I had just come in from church when my husband greeted me at the door. “You’ve got to come out and see this!” he said. “You’ve got Monarchs!”

My fascination with Monarch butterflies began about 10 years ago when I was teaching Grade 8 in a community school. I thought it would be neat to raise them with my class, so I did research, ordered milkweed seeds and larvae, built cages and set off on the journey. Over the Christmas holiday, we lost most of our milkweed seedlings but we had enough to get started. Ravenous larvae made short work of what we had provided and I set off on a search for more food. I found Swamp milkweed (*Asclepias incarnata*) plants at a local nursery and native Showy milkweed (*Asclepias speciosa*) as well at a native plant nursery. These I planted in my perennial border and fed the larvae. Unfortunately, none of our adults survived but my butterfly fascination continued.

I watched that Sunday as two females flitted through my milkweed patch laying eggs everywhere on my Showy Milkweed. Thus began the summer of 2007 when I could usually be found “bottom up” with my nose in the milkweed counting and keeping track of my brood. As summer wore on, I also found larvae on the Swamp Milkweed. I should say that early on I had many an argument with myself about whether to bring any larvae inside to rear. In the end I decided against that and just let nature take its course.

The next day, June 25, dawned cool (12C) and rainy, and I was delighted to find 15 1st and 2nd instar larvae (Figure 1) and another that had been attacked by a spider. The size of these larvae would suggest that they were laid as eggs around June 11 which, according to Anna Leighton (pers. comm., April 2008), corresponds to the first sightings of adults in the Saskatoon area. There was little other evidence of predation over the summer but

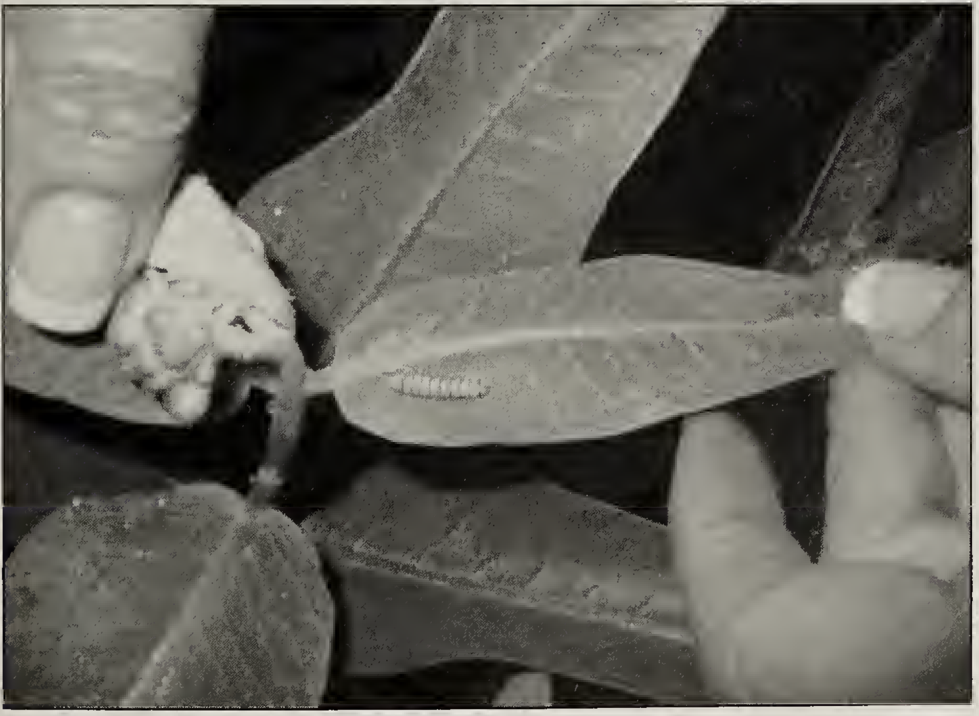


Figure 1.Monarch larva in the first crop, June 25, 2007
S. Brooks

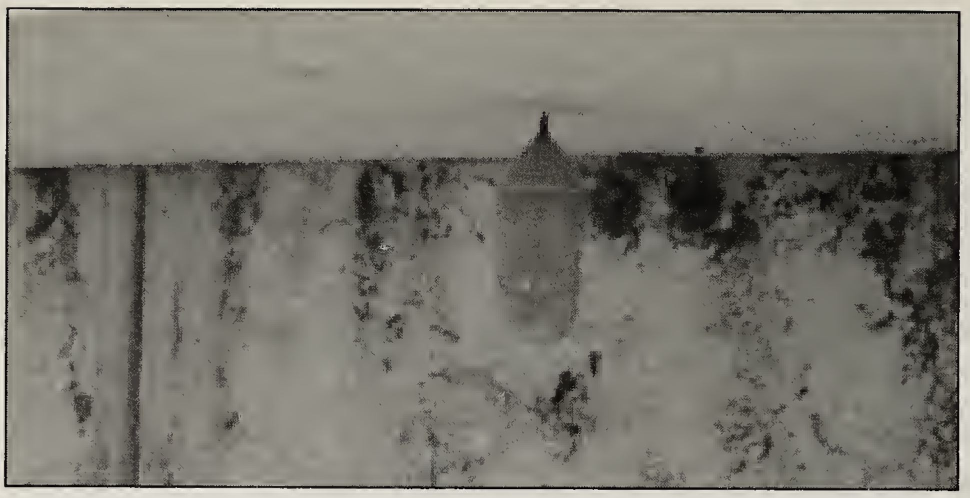


Figure 2. Second generation Monarch chrysalis, August 28, 2007.

the number of larvae varied from day to day. Of course, that could have been due to my being unable to find them. However, it seemed to be the newly hatched ones that disappeared, which may have been an indication of some predation.

I spent my time watching the first crop of larvae. On June 28, I spotted another six to eight eggs and, on July 5, found five new larvae (I'm assuming they hatched from the previously observed eggs). That same day I found one larva hanging in a "J" ready to pupate and another looking for a place to hang. I found these in a large daylily close to the milkweed; the undersides of its leaves turned out to be the location of choice for pupation, with nearly half of the chrysalises sighted there. The other favorite place was a large clump of Siberian Iris and, of course, the fence rails. My first adults emerged on July 18, making the pupation time about 13 days.

The milkweed was full of larvae in all instars munching and growing. There were 30 larvae I could see in the first generation. On July 17, a very tattered female arrived and laid a few more eggs and another on July 20 and 21. The second crop of larvae numbered roughly 20. The timing of this is interesting because it's about six weeks from the first sightings of adults in Saskatoon. At the same time there were six more 5th instar larvae getting ready to pupate and a total of three more chrysalises sighted. July 31 saw the emergence of two males. August 2, I tagged a newly emerged female.

My next observations, on August 13, showed six larvae were still feeding and I noticed an interesting thing. This later batch showed much more prominent black stripes than did the earlier ones. I don't know why this is and I'd be interested to know if this is significant in any way.

At the end of August, I discovered another five chrysalises on the fence rail (Figure 2) and two more in the Siberian Iris (one empty and another still waiting to emerge). As the weather cooled off in mid-September (September 13) Juhachi Asai took the remaining pupae to his house to rear indoors. All four emerged, (all were females) and Juhachi tagged and released them on September 16, 17 and 18 (Figure 3, on the inside back cover, top). There were still two chrysalises too dark to disturb on September 15. They both emerged, a male and a female, and I tagged them both before they flew off. Believe it or not I actually tagged one more female on October 3 (#JAW 740)! In the final analysis, over a period from June 24 to October 3, I know of 8 adults that emerged (3 males and 5 females).

As I've spoken to others I realize that I was not the only one who had been visited by Monarchs. It was an extraordinarily good year and the summer remains magical for me.

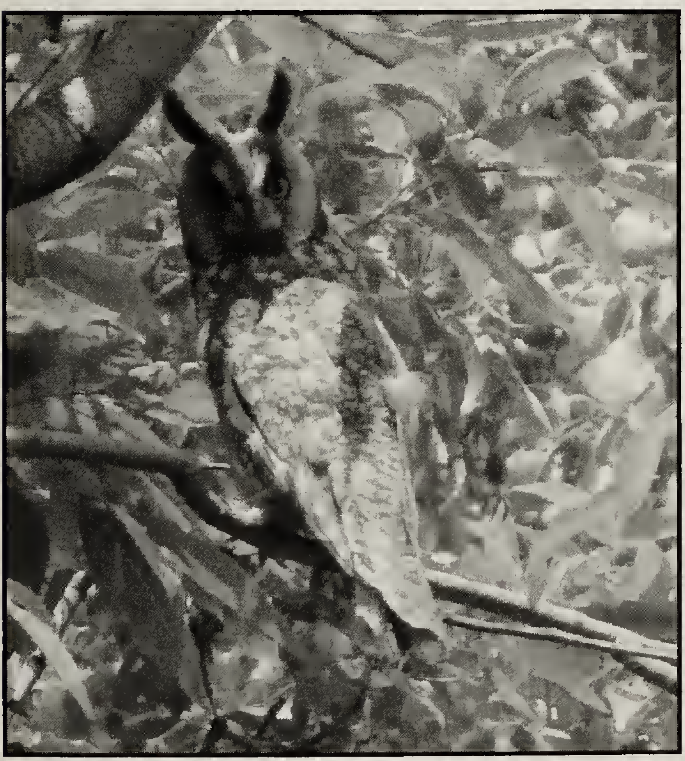
NOTES AND LETTERS

GARDEN VISITOR NEAR INDIAN HEAD

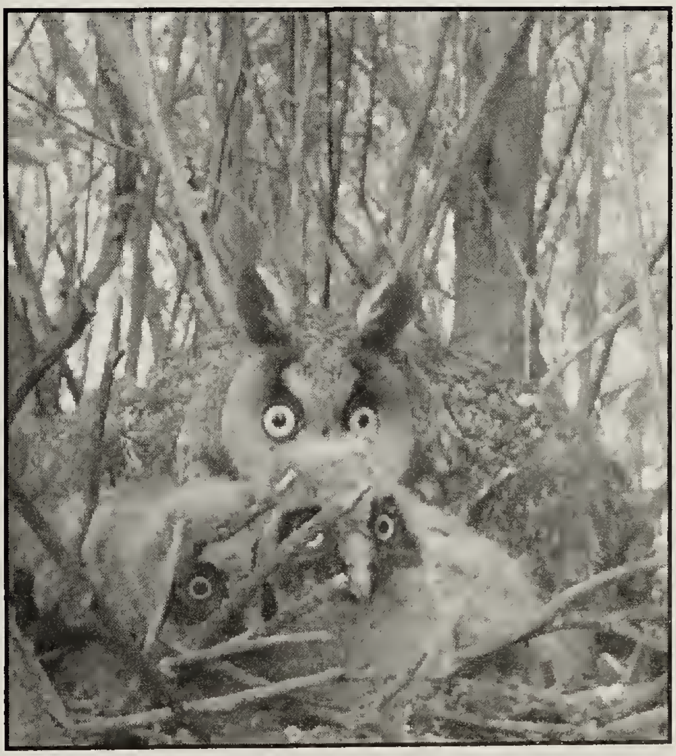
On Saturday, June 14, 2008, I walked down to the garden to check on how things were drying out and heard a '*chit, -chit, -chit*' coming from one of the trees separating my garden from that of my neighbour. A careful search revealed first a small bird, one of the warbler family I think, and then sitting quite still in the branches above, I saw a Long-eared Owl, which I had never seen before. I had my camera in my pocket and took a couple of photographs without disturbing my friend. In order to avoid scaring the bird off, I was not able to move to a position where the light might have allowed a better shot, so this is the best I could manage. Incidentally, the owl, had gone when I checked the spot an hour or so later. The thing I find most unusual is that the bird does not have what I would call a typical owl shape.

Long-eared Owl near Indian Head. *Ron Rushbrooke*

- *Ron Rushbrooke*, Box 204, Indian Head, SK, S0G 2K0



Long-eared Owl photographed near a house off Gordon Road in Regina at the beginning of July. *Morag Granger*



Long-eared Owl hiding behind two of its five youngsters near the Fairview Dam southwest of Greenan. *Dan Zazelenchuk*

SHOWY LADY'S-SLIPPER, *Cypripedium reginae*, IN DISTURBED HABITAT AT THE PAS, MB

The loss of habitat is a major cause of the drop in plant populations. However, a reverse state of affairs has apparently caused a population of Showy Lady's-slipper, *Cypripedium reginae*, to increase near The Pas.

Some 41 years ago an 8-mile-long, east-west road was cut through a low, peaty bog with brown water near The Pas. In digging a ditch along side the road, the bulldozer mounded a mixture of peat and clay from the bottom of the ditch alongside the ditch it dug. The Showy Lady's-slipper, occurs in the area widely but sparingly and after some years, young plants of this orchid began to appear on the top of the soil mound. With the passing of years, fully developed clumps became established. They are protected by the deep ditch full of brown bog water and so are easy to see but are unapproachable! The heaped-up soil, now settled, has over 140 clumps of Showy Lady's-slipper growing along it. These plants are smaller than the usual form in different habitats and reach only a third of meter in height. As the dead stems and capsules from the previous years remain in each clump, it is hard to see from the road how many new capsules were set in 2007 but it is considerable. Here in this man-made habitat this splendid orchid is proliferating at a gradual but slow pace.

- *Walter Krivda*, Box 864, The Pas, MB,
R9K 1K8

CHANGE IN POPULATIONS OF CATTAILS IN MANITOBA

Recently, while traveling by car between Winnipeg and The Pas, I observed the cattails in the highway ditches. Common Cattail, *Typha latifolia*, with the stout brown head, is being joined by Narrow-leaved Cattail, *Typha angustifolia*. The head, of Narrow-leaved Cattail is only as thick as one's little finger and the tall leaves overtop the heads. In Common Cattail, the heads tower over the leaves, which are broad. It seems that Narrow-leaved Cattail is moving its range northwards into the range of Common Cattail.

The Narrow-leaved Cattail, so far as is known to me, occurs in three small colonies in The Pas area. The largest colony is at Orok (named after a Doctor Orok, in the employ of the Winton Lumber company here) near the airport north of town and borders the lagoon. The plants here are 8 feet high, narrow-leaved and have seed heads typical of *Typha angustifolia*. Specimens of these were collected.

The structure of the pollen grains is different in the two species as can be easily seen with a x 20 pocket lens making it a good project for students to study. There is also a small moth that feeds inside cat-tail heads. These can be raised indoors in winter by placing cattail heads in a large jar and keeping it covered. The moths hatch and fly inside the jar. Some years many heads are affected, other years almost none.

- *Walter Krivda*, Box 864, The Pas, MB,
R9K 1K8

THE GREAT SAND HILLS REGIONAL ENVIRONMENTAL STUDY: FINAL REPORT

THE GREAT SAND HILLS SCIENTIFIC ADVISORY COMMITTEE. 2007. Saskatchewan Environment, Regina. 232 pages. Hard Copy has soft cover. 28 x 21.5 cm. Contains numerous charts and maps, many in colour. Hard copy has associated files on an accompanying DVD. Report available on the internet under its title, or via the Saskatchewan Government website: http://www.environment.gov.sk.ca

This is a Saskatchewan Government science-based environmental management report prepared for public release. The Great Sand Hills of southwestern Saskatchewan comprise about 2000 square kilometres of land that is mostly a natural area. It is a combination of ecologically unique dune sand environment and representative shrubland and grassland in mixed-grass prairie. Most of it is under moderate grazing pressure and much of it is under severe natural gas development pressure. For these reasons, and their substantial size, these hills have received scientific

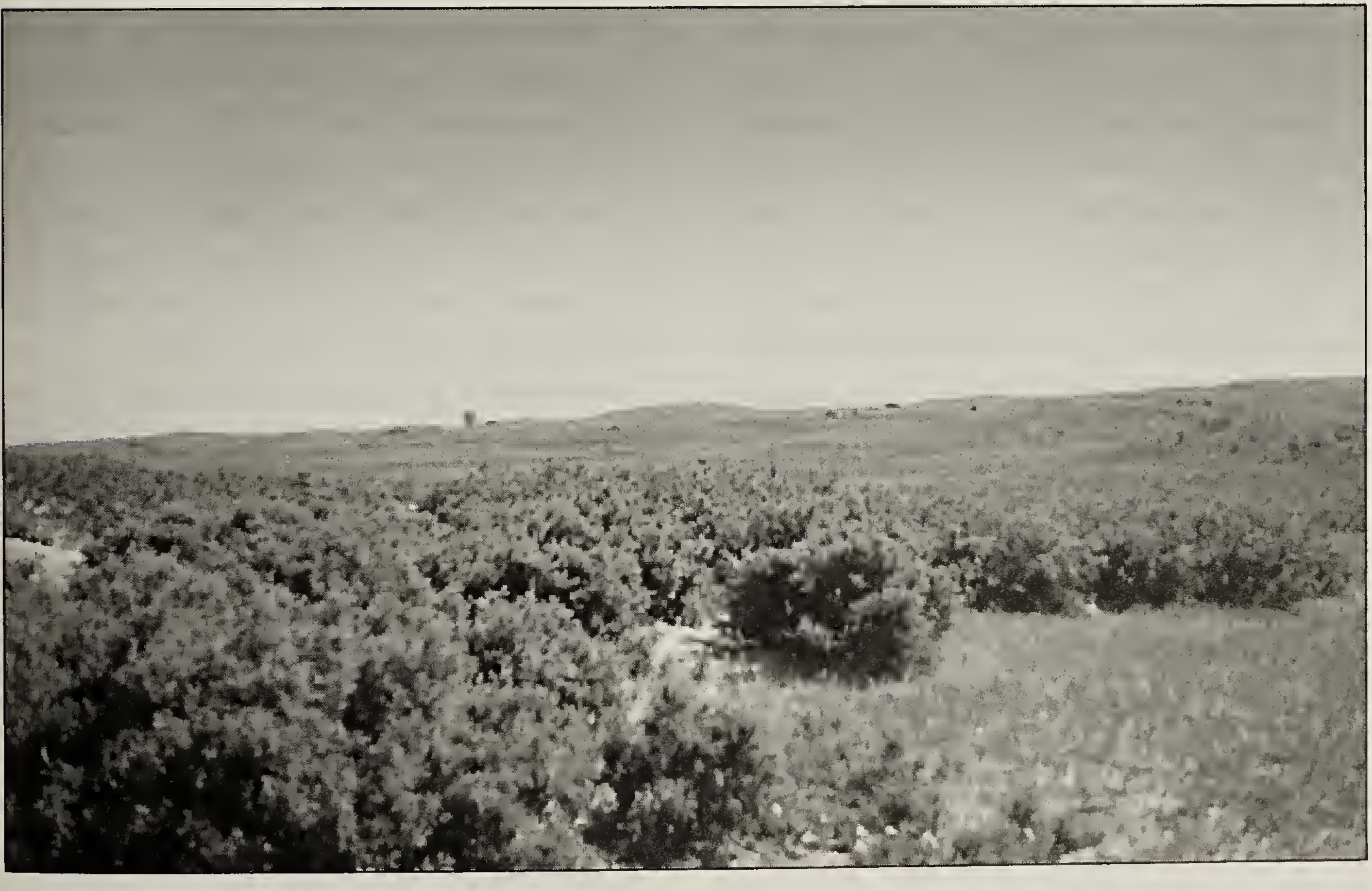


Figure 1. North-facing view from the east shore of Crane Lake in the southern part of the Great Sand Hills. The shrubland in the foreground and the stabilized grass-covered dunes in the background are typical of the Great Sand Hills landscape. The open sand on the left side of the picture connects to larger open areas on the east shore of the lake, Ord's Kangaroo Rat habitat. *H. Epp*

and conservation attention for decades,[2,3,4,6] this report being the result of the most recent study.

The Great Sand Hills study report is being subjected to the environmental assessment (EA) process by the Saskatchewan Government. The Government is to be commended for subjecting one of its environmental management plans to its own EA process, as this provides the opportunity for a full, detailed public review. The purpose of the present review is to provide a natural history and ecological perspective on the recommendations and thereby contribute to the overall review.

The report is divided into four major parts. Part 1 is introductory, and reviews existing information. Part 2 covers the baseline assessment and the data underlying it, providing much new information. Part 3 predicts trends and develops management scenarios for decision-making. Part 4 provides recommendations for ecological integrity and sustainability, agricultural land use practices, and controlled development. Actually, there is a fifth part, not numbered, the executive summary–a very valuable addition. Authorship is by committee. The DVD accompanying the hard copy report contains a copy of the report itself, appendices including data tables providing the size, location, and nature of the biodiversity sites, distribution maps of the species used to assess biodiversity, and a copy of the economic assessment, its methodology, data, and calculations done to provide information on the current economic status of the study area.

In this review, I attempt to answer the following questions: (1) Does the report meet its goal? (2) Is the goal appropriate? (3) Are the methods appropriate and soundly applied? (4) Are the data representative and accurate? (5) Are the management scenarios real, viable options? (6) Is the organization and language logical and easy to follow? (7) Are there editorial and/or factual errors?

A statement of purpose or goal is provided at the beginning of Part 1, and is repeated in the executive summary: to “provide strategic recommendations to guide human activities...so that the long-term ecological integrity of the area is maintained” while continuing to realize economic and cultural benefits. Given the size, sensitivity, and relatively natural state of the Great Sand Hills environment, and given today’s societal emphasis on environmental sustainability and the urgent need for it, the baseline study provides information useful for this broad purpose. The goal, then, is not only met, it is timely and appropriate.

Methods. Where to begin and to end? First, the landscape ecology approach employed is appropriate in an instance where a large land base is subjected to a study identifying the nature and extent of ecological variance. Although the report addresses a general audience, the authors make it clear that, due to the complexity of the methodology used, avoidance of all jargon and mathematics is impossible. I agree. The MARXAN methodology involved in identifying biodiversity hotspots employs much complex mathematics. My own view is that this provides credibility, but that much of it, as has been employed here, is not necessary for identifying such places. Moreover, as a minor criticism, I do not see an evaluation of the hotspots with regard to whether they are “source” or “sink” habitats for the species involved.[7] (A source habitat is one in which the annual reproduction rate is higher than the death rate for species adapted to it, whereas a sink habitat is the opposite, a place where long-term survival of a species is not possible.) It is well known that where ecological areas overlap, biodiversity tends to be higher than in the central parts of such areas. Distinguishing between such habitats is a qualitative as well as a quantitative evaluation, but it provides information that assists in managing an area for ecological sustainability. Emphasis on diversity alone can lose sight of the possibility that biodiversity hotspots might, in some instances, be mostly sink habitats for species better adapted to other places, so that protecting the hotspots only can result in loss of some of that variety if the core ecological areas are not also protected. It is important not to give developers the idea that if the hotspots are protected then the rest of the natural environment is fair game for population reduction.

This report is very strong on new data generation, clearly a methodological priority. Part 2, Chapter 2 provides the physical background data needed to address the management scenarios, and Part 2, Chapter 3 provides the biodiversity data and assessment also required for this purpose.

Description of the physical environment is highly detailed, including climatological data and predictions based on the current predicted warming trend of 2-4 degrees C higher than the long-term average. Predictive modeling indicates that, along with a northward shift in ecological zonation, higher temperatures will bring a significant reduction in shrub and tree cover and an invasion of what are now more southern grasses. A warmer climate also is likely to lower the water table, increasing pressure on stock watering options. Fires are likely to increase in frequency as well, and active dunes are predicted to increase in size and number, but the predictions are appropriately muted given the presence of so many factors influencing the range of possibilities that predictability is limited. The emphasis in this chapter is on the potential effects of global warming, not on the effects of other climatic possibilities. The data on which the predictions are made are so comprehensive, however, that other potential possibilities may be inferred.

Chapter 3 in Part 2 covers the biodiversity assessment. It is another heavily data-based presentation, but it also provides an analysis of the data using the sophisticated, highly mathematical MARXAN analytical process. Data are analyzed according to biodiversity criteria so as to be able to identify the most diverse sites. The reason for the emphasis on biodiversity rests in the assumption that if only part of an ecosystem can be protected, then protection of its most diverse parts, biodiversity "hotspots", will be the most effective way to maintain ecological integrity and sustainability. Using indicator and rare species, this analytical system selects the smallest possible areas needed to meet conservation and protection goals. Additionally, the analysis is put to use by estimating "range health" across the Great Sand Hills. One result that may surprise some is that the biodiversity hotspots do not necessarily coincide with the ecologically "healthiest" areas. The north is the "healthiest" part of the Great Sand Hills, but hotspots occur most frequently in the west and south.

The MARXAN analytical process appears to have been competently applied. It is not the identification of the smallest high biodiversity sites that are suitable for protecting ecological integrity that is problematical, however. The data and the analysis both may be sound, but it is the assumption that is open to question as it is vulnerable to being accused of catering to development interests. The report actually does not do much to justify the assumptions under which the work has been done, nor is it strong on delineating its own assumptions.

There can be no doubt that the data portion of this report covers the Great Sand Hills area well, and that it is well presented and effectively analyzed. The report is, however, surprisingly less strong in integration of the new data with already existing information. A case in point is the vegetation study done by G.K. Hulett[4] in the 1960s. I can find no reference to this important work. The new data do overwhelm anything obtained before, but older information is always useful for verification and in establishing trends.

Management scenarios. Briefly, the scenarios are: (1) development of proven and probable gas reserves to continue, limited to 8 wells per section (square mile) and a maximum of 8 well pad surface leases per section, no new grazing restrictions, and no new protected areas; (2) as scenario 1, but with more exploration for possible gas well sites; (3) up to 8 wells per section with limitations to drilling for new wells, well pad surface leases limited to 2 per section, new protected areas in "core biodiversity areas", protection for wetlands, and no new water holes in "core biodiversity areas." With regard to making a choice among the three management scenarios, is the process simply to create two "straw men" to knock down in the full knowledge of which will be the preferred scenario from the beginning? I think not entirely. All three scenarios are viable options, depending on the criteria used to evaluate them. If the criterion is economic development first, then Scenario 1, with no new environmental restrictions imposed and no new environmental protection measures, is the obvious one to choose. Scenario 2 restricts gas well development to proven and likely sites, but otherwise is similar to Scenario 1, and would appeal to those promoting development with the fewest possible restrictions. Scenario 3 proposes placing some restrictions on "well pad surface leases", and includes establishing new protected areas, protecting wetlands, and allowing no new watering holes in "core biodiversity areas". The criterion for choosing among the scenarios and preparing the recommendations relates back to the goal of the study: "minimizing surface disturbance as a means of contributing to the sustainability of the ecological integrity of the area." This criterion does set the stage for eliminating the first two scenarios. In the world of economic and resource development, the first two scenarios are quite viable and worthy of consideration. In the conservation world, the third scenario is very obviously the preferred one. In the world of government, into which the study itself fits, people, not ecosystems, vote. So the somewhat convoluted conclusion must be that while the criterion itself clearly precludes the first two scenarios, they nonetheless must be considered because of the nature of government.

Regarding the process of choosing from among scenarios, is this a good way to go about making environmental choices? If application of science to the decision-making process is the criterion, as it obviously is here, this is a good way. More than two decades ago, a group of wildlife biologists calling themselves MacNab[5], proposed a method for application of reductive science methodology to holistic decision-making. These biologists have suggested that assumptions guiding management practices should be treated *as if* they were scientific hypotheses, and then tested by subjecting them to falsification processes. This applies reductive, positivist, science to the synthesis involved in preparing holistic plans, joining the two opposing science paradigms into one consilient process. I have been promoting this approach as useful to improving the scientific credibility of the environmental assessment process for more than a decade now.[1] The Great Sand Hills study, then, uses a decision-making approach that enhances the scientific credibility of its recommendations, but it makes no reference to MacNab's previous work in this regard.

Organization-wise, it is difficult to find fault with this report. I have only one criticism in this regard: given the money obviously spent on printing coloured charts, maps, and satellite images, a few photographs of key areas, including especially some of the biodiversity hotspots, would have improved the report. The layout and printing jobs are outstanding, the readability is good enough in most instances, and the hard copy paper is high quality, all of which are important to a report that should receive as much use as this one merits. Including appendices with extra data in a DVD attached to the hard copy is useful and appropriate during this time of computers. The committee of authors clearly is united in its focus on achieving the goals. The report tends not to suffer much from the usual problems associated with something being constructed by a committee.

Editorial errors are few, but they do exist. I haven't proof-read the report, of course, but I did notice some small errors: note the spelling of "dessication" on page 45, whereas the word is spelled correctly on page 35 ("desiccation"). The citations "Hart and Hunt 1980" and "Barclay and Weichel 1979" on page 13 do not appear in the list of references.

No reviewer of a report as comprehensive as this one, with its presentation of enormous amounts of data, can provide an adequate assessment of potential factual errors. Hence, I make no attempt to determine whether all of the plant and animal identifications are correct or if mistakes have been made in the mathematical analyses. The people who did these jobs are well known experts in their fields, and the accuracy of the information they provide must be taken for granted.

This is an environmental management report, not a natural history or a strictly academic presentation, yet it is useful to all three endeavours. The analysis uses scientific methodology and technology not used in natural history works. Nonetheless, the report provides a data base that should prove important to anyone interested in species distributions, population dynamics, migration behaviour, and other aspects of natural environments and their conservation status.

The report is available to the public via internet search engines under its title and via the Saskatchewan Government website listed above. Hard copies are, or will be, available for perusal in major libraries. So, should you rush to your computer and download the report? It depends on your level of interest and the nature of your work. If you work with a gas company or a consulting firm thereto, the report is a must. If you are a biologist, geographer, geologist, or social scientist working in dune sand environments in the North American plains ecosystem, the report is a must as well. If you are a naturalist interested in birds, plants, or environmental protection, the report is both interesting and useful, if not a must. No one doing academic or land management work of any kind in the Great Sand Hills and surroundings in the future will be able to ignore this report. When I look back on all my years of experience in government, consulting, and part-time university teaching in environmental management, I cannot think of a single report on a specific area that exceeds this one in the quality of its science, methodology, and production.

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Reviewed by Henry Epp, 2 Candle Terrace SW, Calgary AB T2W 6G7

* * *

BIRD SONGS OF THE NORTH AMERICAN PRAIRIE

JOHN NEVILLE. 2007. Audio 2 CD set. Neville Recording. ISBN: 978-0-9781797-3-1. www.nevillerecording.com. $26.00 CAN

An English immigrant, already familiar with the birds of Great Britain, Neville soon realized the importance of bird song as he sought to identify new species in Canada. For two decades he has been recording birds, mostly in Western Canada–from coastal British Columbia east to the Rocky Mountains, and north through the boreal forest to the Arctic tundra. (His Beginner's Guide to Bird Songs of North America was reviewed in *Blue Jay*, September 2007). Bird Songs of the North American Prairie, a 2 CD set featuring the calls and songs of 166 species of birds, is the result of recent extensive travel across the Canadian and American prairies. The CDs include 138 of his personal recordings; the remaining 28 were contributed by seven other "recordists" whom he recognizes appropriately.

Apart from a short introductory section titled Spring Migration, Neville organizes the birds by habitat:

Grassland; Riparian Wetlands; Marshes, Potholes, Lakes and Rivers; Forest; and Cliffs. Nearly all of the recordings are first-rate: clear, typical of the species, and free from background mechanical noise (a real challenge today). The microphone, not particularly directional, frequently picks up other bird species in the background. That is as it should be; birders have to learn to separate individual bird songs, nearly always part of an avian chorus, especially in the early morning. In a few of the recordings, however, the background bird song is intrusive; novices may have trouble deciding where the designated bird leaves off and another takes over. The Spotted Towhee interferes with the Western Meadowlark, for instance

The listener who simply wants to enjoy prairie bird songs or review all the sounds before spring arrives will likely be satisfied with the arrangement of species on the discs. Anyone wanting to hear birds in a more organized way, especially species that are closely related, won't be as happy. The experienced birder, in particular, will find the arrangement inconvenient and sometimes unpredictable. A number of grassland sparrows are placed together, but inclusion of the White-throated Sparrow, a forest bird, is unfortunate. The Song Sparrow is properly riparian but the Lark Sparrow isn't. The placement of Mountain and Eastern bluebirds is another example. Both birds like open space; the Eastern is placed in grassland, and the Mountain should be there with it, not in the forest. Had Neville increased, even slightly, the number of habitats, organization would have been easier and more credible. Two prairie habitats - 1) Farmyards, villages and towns and 2) Coulees - have been overlooked. Eastern and Western Kingbirds are associated with farmyards and small towns; so too are Chipping Sparrows, Lark Sparrows, Brown Thrashers, American Robins, House Wrens, Baltimore and Bullock's orioles, Warbling Vireos, House Sparrows, and Yellow Warblers. Coulees are the natural habitat of Black-billed Magpies, Sharp-shinned and Cooper's hawks, Orange-crowned Warblers, Yellow-breasted Chats, Gray Catbirds, Indigo and Lazuli buntings. Having to place birds in a limited number of habitats diminishes the value of the disc.

Neville briefly introduces each bird song, often naming the place where the recording was made, a valuable addition. A quick check indicates that he recorded in Alberta, Saskatchewan (frequently) and Manitoba, as well as North Dakota, South Dakota, Montana, Minnesota, Utah, Kansas, Nebraska and Arizona. In some cases, the name of an obscure river or place is not attached to a province or state, an unfortunate oversight.

Western Canadian listeners may be surprised at the number of prairie birds that are rare or absent in Canada. We are inclined to forget that prairies extend as far south as Nevada, Arizona, Oklahoma and Texas. Most Canadians will have to cross the border if they want to become familiar with the Greater Prairie-Chicken, Sage Sparrow, Prairie Warbler, Northern Bob-White, Bell's Vireo, Carolina Wren, Blue-gray Gnatcatcher or Red-bellied Woodpecker. And we consider ourselves fortunate if we happen to hear or see a Greater Sage-Grouse, Eastern Meadowlark, Dickcissel, Northern Mockingbird, Northern Cardinal, Whip-poor-will, or Black-headed Grosbeak. Neville has recorded all of the above species and well over a hundred others, residents in all or part of the Canadian prairie.

A few final observations: In a region as large as the prairies, the songs of a bird species may vary considerably. I have a Saskatchewan-trained ear. Neville's Swainson's Hawk doesn't sound like those around Saskatoon; his Blue Jay (recorded in Kansas) is a far cry from the husky-voiced bird we know. Often we hear a variety of ducks on a slough and cannot readily distinguish the authors of the sound. Neville has included Wood Duck, Mallard, Gadwall, Northern Pintail, American Wigeon, Northern Shoveler, Blue-winged Teal, Redhead and Lesser Scaup–an interesting and valuable addition. Something of a surprise, he has also included sounds made by four prairie mammals and two frogs, all well recorded: Coyote, Red Squirrel, Richardson's Ground Squirrel and Black-tailed Prairie Dog; Chorus Frog and Northern Leopard Frog.

Shorebird recordings are relatively rare and very useful. Neville's shorebirds include Killdeer, Piping Plover, American Avocet, Black-necked Stilt, Spotted Sandpiper, Willet, Marbled Godwit and Wilson's Phalarope, all good choices. But we do not hear the most familiar migrants like Greater and Lesser yellowlegs, Black-bellied Plovers and Golden-Plovers, the two Dowitchers, Semipalmated and Stilt sandpipers, a significant omission in these discs. Instead, he has included Sanderling, White-rumped Sandpiper, and Baird's Sandpiper, all relatively obscure shorebirds, not readily identified by sound.

Finally, Neville's choice of migratory birds at the beginning of Disc #1 is a strange mix. The Sandhill Crane, Tundra Swan and Snow Goose are wise choices, but rarely, if ever, do we hear the Whooping Crane as it migrates across the prairies. The Whooper could have been replaced by the more widespread and more vocal White-fronted Goose, omitted from this collection. And if the Harris's Sparrow is a good fit, the White-throated Sparrow, a bird mostly known on the prairies as a migrant, would have been better there than amid grassland sparrows.

Despite some of the reservations I have registered, I believe this set to be one of the most interesting and valuable recordings we have of prairie birds. For the novice, it opens up the prairie bird world; even the experienced birder, familiar with most if not all of the sounds, will appreciate the quality and variety of these two discs.

Reviewed by J. Frank Roy, 912-606 Victoria Avenue, Saskatoon, SK, S7N 0Z1. E-mail: jfroy@shaw.ca

* * *

"Frost crisps the leaves, begins to break them down. Fall rain compacts them. Leaf mold is in the making. The leaves provide a blanket for lesser woodland plants and the slow heat of decay warms them somewhat."
Hal Borland, *Beyond Your Doorstep*, p. 349.

IN MEMORIAM

RALPH D. CARSON, 1938-2007

C. STUART HOUSTON, 863 University Drive, Saskatoon SK, S7N 0J8, and ROBERT W. NERO, 546 Coventry Road, Winnipeg, MB, R3R 1B6.

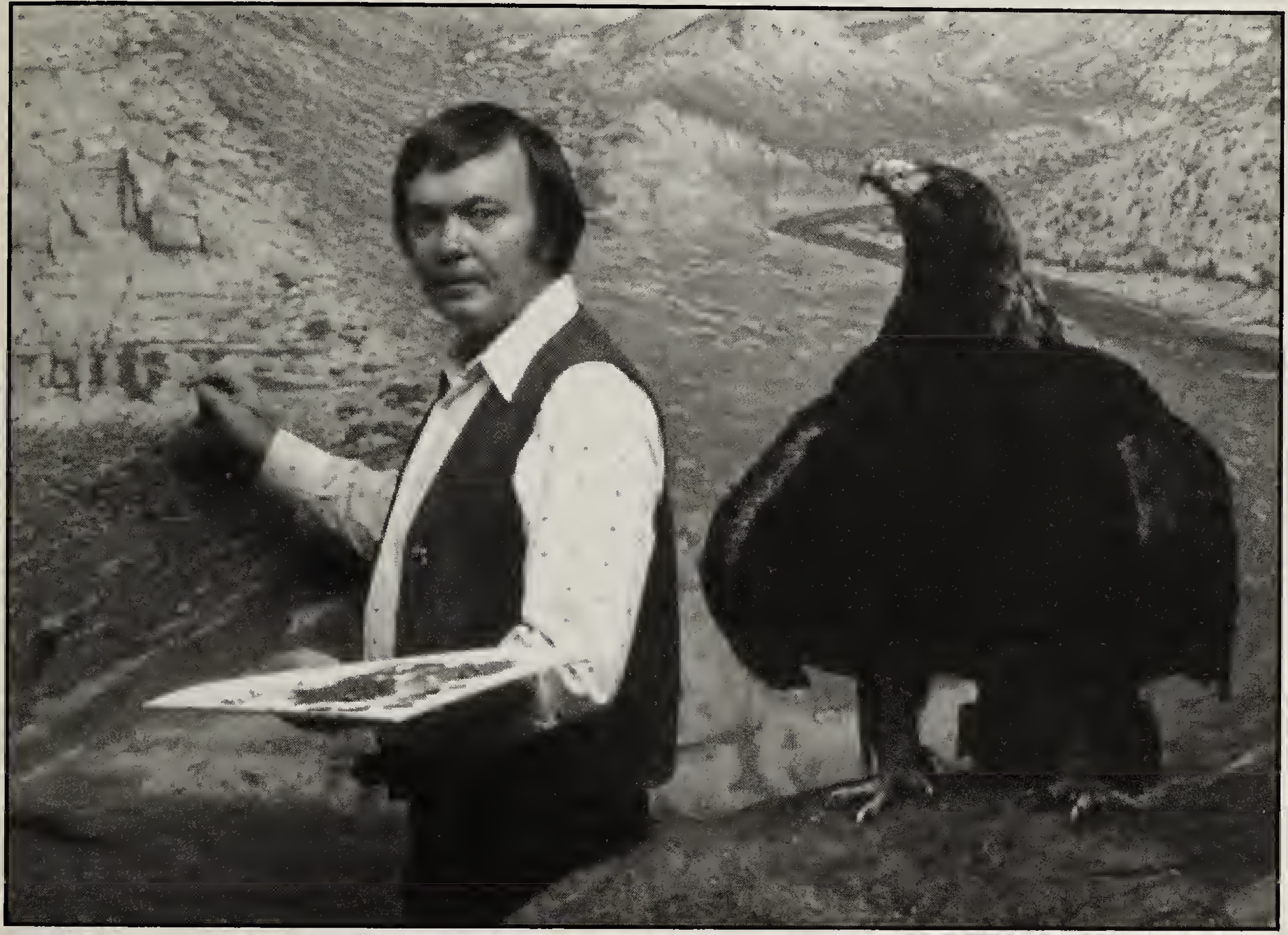


Figure 1. Ralph Carson with mounted Golden Eagle, courtesy PMA

Ralph Dale Carson was born to Mike and Sasha Ostoforoff on January 2, 1938 and raised on their farm in the Swan River valley, just four miles west of the Manitoba boundary, near Arran, SK. Ralph began drawing at age four and learned taxidermy at age 11. The family moved to Kamsack, SK in 1953. When Robert Nero gave a lecture at the Kamsack High School, the principal, Fred Reusch, insisted on Nero's meeting an Ostoforoff lad who showed an interest in wildlife and unusual talent in drawing birds and mammals. Not long afterwards, Fred Bard, the museum's director, offered him summer employment.

From 1959 to 1963 (by then having changed his surname to Carson), Ralph was a full-time museum preparator and illustrator at the Saskatchewan Museum of Natural History (now the Royal Saskatchewan Museum) in Regina. In 1960, he received the Cliff Shaw Award for four pages of imaginative sketches entitled "Impressions of a Boreal Owl" (*Blue Jay* 18:57-60, 1960). (This was the only occasion when Cliff's surviving brother, Larry, presented the Cliff Shaw award; *Blue Jay* 18:194). Ralph also wrote about and illustrated unique and previously undescribed courtship behavior of the Short-eared Owl (*Blue*

Jay 20:2). He also wrote about the destruction of a colonial bird colony by fishermen at Suggi Lake, including two of his photographs (*Blue Jay* 24:96-97). He assisted Nero in his ornithological investigations of Lake Athabasca, June 29 to July 28, 1960, and again for three weeks in July, 1961. He contributed the sketches that embellish Nero's *Birds of the Lake Athabasca Region* (1963) and the Harris's Sparrow on the cover of Nero's *Birds of Northeastern Saskatchewan* (1967).

For two winters in the early 1960s, the SMNH seconded Ralph to the National Museum of Canada where he prepared bird specimens for three of that museum's bird habitat groups: seabirds, arctic geese, and a prairie marsh. In 1965 he joined the Provincial Museum of Alberta as Assistant Curator of Natural History, where he created three-dimensional dioramas and others that toured the province (Figure 2, on the inside back cover, bottom). He wrote and illustrated various "Museum and Archives Notes" published by the Provincial Museum of Alberta.

Ralph was a delightful if somewhat eccentric personality. RWN remembers Ralph walking down the street in Regina, dressed as a cowboy and carrying his live pet boa constrictor around his shoulder. He died in Edmonton on 3 July 2007 after a lengthy respiratory illness. Ralph is survived by his daughter, Donna, of Saskatoon, and his brothers, James Carson, a wildlife artist in Winnipeg, and Walter Ostin of Cobble Hill, BC. We are grateful to James Carson for providing photographs and pertinent information.

* * *

TURNAROUND

One cold day in September
and we were already thinking winter
listing chores to perform in readiness
for the long cold days and nights,
but now it's November and we're
still enjoying autumn sun
with not a bit of snow to see;
so we affect the good days
worrying about the future
though I am glad the work is done.

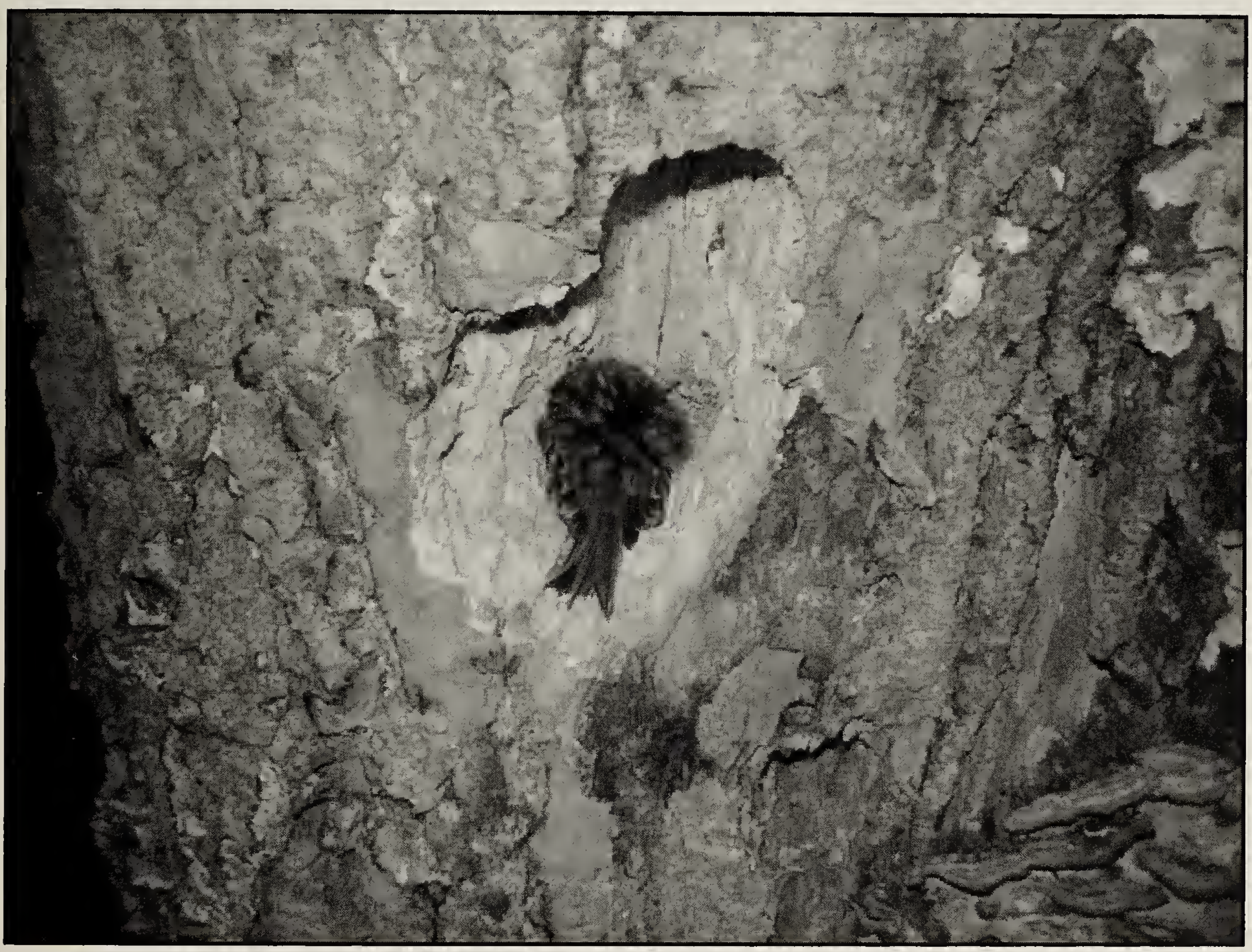
- Bob Nero

MYSTERY PHOTO

SEPTEMBER 2008 MYSTERY PHOTO

Can you discern what creature is on top of what object in the photograph of incredible animal camouflage on the back cover? The photograph was taken in a PFRA pasture southeast of Weyburn on August 6, 2004.

ANSWER TO THE JUNE 2008 MYSTERY PHOTO



Robert Alvo of Ottawa, Ontario correctly identified the bird as a Brown Creeper and writes:

“Brown Creepers live virtually their whole life on tree trunks. There they mate, feed, nest, grow up, hide and...sleep!! This bird went to bed before 10:30 p.m., then woke up and left before 06:05 the next morning. This species nests on tree trunks behind bark that is peeling off. Maybe they also sleep behind peeling bark. It could be that this bird went to sleep behind a piece of peeling bark that subsequently fell off - who knows?” Bob is currently working on a book entitled *Being a Bird in North America*.

The editors would like to thank Bob Alvo for writing in, and Jim Duncan for providing the photograph.

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Common names are used for birds, mammals, butterflies, reptiles and amphibians. Bird names follow the Checklist of North American Birds by the American Ornithologists' Union (7th edition, 1998); mammal names, Mammal Species of the World by Wilson and Reeder; butterfly names, The Butterflies of Canada by Layberry *et al*; and names of reptiles and amphibians follow Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico by Brian I. Crother, Committee Chair (2001), <http://www.ssarherps.org/pdf/Crother.pdf>. For other groups, both scientific and common names are included.

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